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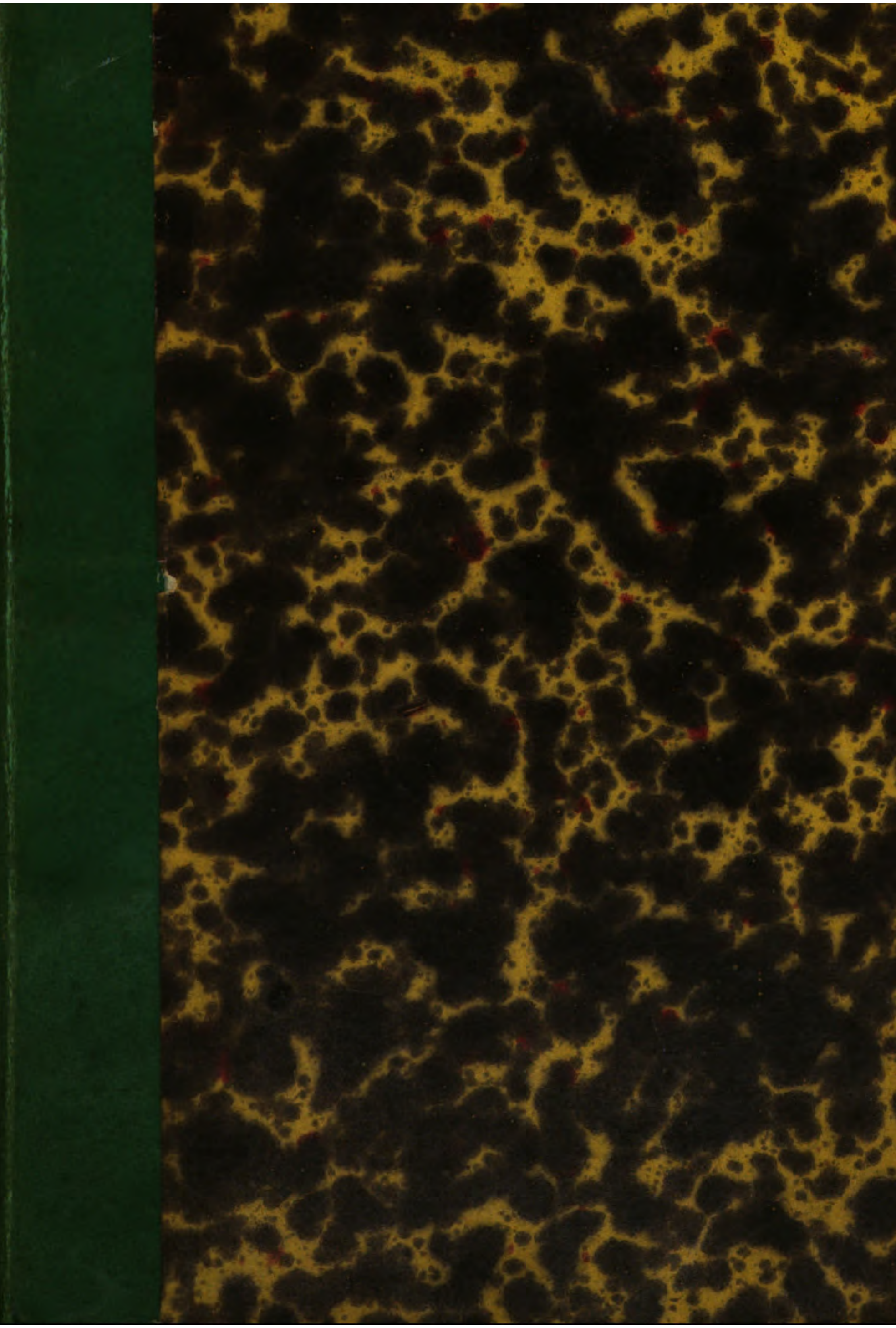

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THE

MEDICO-CHIRURGICAL

REVIEW,

AND

JOURNAL

OF

PRACTICAL MEDICINE.

(NEW SERIES.)

VOLUME SEVENTEEN,

[1st of APRIL to 30th of SEPTEMBER,]

1832.

VOL. XXI. of ANALYTICAL SERIES.

Edited by JAMES JOHNSON, M.D.

PHYSICIAN EXTRAORDINARY TO THE KING,

&c. &c. &c.

LONDON:
PUBLISHED BY S. HIGHLEY, 32, FLEET STREET,
AND WEBB STREET, ST. THOMAS'S HOSPITAL,
And all other Booksellers.

BIBLIOTHÈQUE
DE L'UNIVERSITÉ
DE GAND.

PRINTED BY G. HAYDEN,
Little College Street, Westminster.

THE
Medico-Chirurgical Review,
No. XXXIII.

APRIL 1, TO JULY 1, 1832.

I.

A TREATISE ON THE INJURIES, THE DISEASES, AND THE DISTORTIONS OF THE SPINE; FOUNDED ON AN ESSAY TO WHICH THE JACKSONIAN PRIZE, FOR THE YEAR 1826, WAS ADJUDGED BY THE ROYAL COLLEGE OF SURGEONS. By *R. A. Stafford*, Surgeon to the St. Mary-le-bone Infirmary, &c. Octavo, pp. 302. London, 1832.

MR. STAFFORD informs us, that his information on the subjects of which he professes to treat has chiefly been acquired at the bedside, from cadaveric investigations, or from morbid preparations. His arrangement is that proposed by the Jacksonian Committee of the College—first, the Congenital Diseases of the Spine—secondly, the Injuries—thirdly, the Diseases and Distortions of the Vertebræ—and lastly, those of the Medulla and its Membranes. Some of these subjects have been copiously discussed of late years, and little novelty can reasonably be expected from a fresh inquirer. Others, for instance the congenital malformations, are not likely, we suspect, to shine with any new or brilliant lights, whoever he may be that ventures to bring them into public view. Perhaps a surgeon of great experience might communicate facts of which we are ignorant, and from them draw conclusions practically useful, respecting the injuries to which the spinal column is liable; but we doubt whether any young man can possibly do what Mr. Stafford confidently promises—compose a work on the diseases and injuries of the spine, which shall not be, for the most part, a compilation. We do not utter this opinion to derogate in the least from Mr. Stafford's merit, but we make the prediction with too firm an expectation, though not with any wish, of seeing it fulfilled. We shall pass without further preface to the examination of the volume.

For the various malformations of the spine, Mr. Stafford particularly refers to the work of M. Ollivier. The first chapter, then, is on spina bifida, and, as it would be no disgrace to Mr. Stafford to pretend to no extended experience on a malformation comparatively rare, we find the best authorities freely quoted. As we have not space, however, for the opinions of those older writers, to whom diligent students and zealous inquirers can always refer, we shall pick out what new matter chances to present itself, and leave the remainder for the reader of the volume. The following short

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extracts shew the seat of spina bifida, which is by no means confined to the lumbar region.

> "We now come to the seat of Spina Bifida; it has been usually described as a lumbar tumor, but it may occur in any part of the spinal column, from the cervical portion to that of the sacrum, and various authors relate well-authenticated cases where each part, and sometimes the whole of the canal, has been defective and involved in the disease. It is not necessary, however, to cite these cases; we have examples sufficient of a later date, and our museums teem with preparations illustrative of this fact. In some we see the whole spine defective in its spinous processes and rings; in others, two parts of the column are malformed, leaving the intermediate space perfect, and in others again, the cervical, the dorsal, lumbar, and the sacral. The cause of this imperfection of the vertebræ must be no doubt owing to the cessation of ossification, and to the imperfect closure of their rings during utero-gestation, and this is precisely analogous to all those malformations which originate from the want of union of the two halves of the fœtus while in progress of formation; such as a portion of the back part of the occipitis being deficient, cleft palate, hare-lip, and an incomplete junction of the parietes of the abdomen at the linea alba. Spina Bifida is often combined with one or other of these anomalies, and there is a preparation in the College of Surgeons which well illustrates the analogy between them. In the same fœtus, there is spina bifida in the dorsal region, and an incomplete closure of the parietes of the abdomen, and thus the peritoneum and the intestines protrude." 12.
>
> "This fluid is most frequently contained between the arachnoid membrane and pia mater, but occasionally it has been known to exist between the arachnoid membrane and dura mater, and sometimes between both at the same time. Portal, with others, speak of its having been contained in a canal which they all assert exists in the substance of the medulla; but the correctness of this fact is doubted by anatomists. In all those cases which were drawn on purpose to represent the distribution of the nerves, the fluid was contained between the arachnoid membrane and pia mater; but in drawing I. it existed in separate cells or cysts. In this case, when the tumor was punctured, all the fluid was not evacuated at once, but there remained behind small distended bladders of it, unconnected with the common cyst. This was seen more particularly in one on the right side, which being itself about the size of an orange, was obliged to be punctured, to let out its contents. Upon examining the tumor after death, there were found two large cysts, and a number of smaller ones, about the size of a pea, existing in the parietes of the tumor. The large cavity in drawing No. I. was no doubt the common cyst connected with the vertebral canal, with its neck, or the part joining immediately with the spine, filled up by newly-organized lymph, and thus closing up the communication. The smaller one of the two was quite impervious, and its internal surface was smooth; it appeared to be continuous with the external membrane, or what would have been the dura mater of the other cyst; and it is probable that it had been connected originally with it, and afterwards closed up, and then, if this conjecture be right, the fluid must have escaped through the arachnoid membrane and dura mater. The other cells also were quite impermeable, and it would be almost impossible to account for their existence." 18.

In order to appreciate the value of any proposed plan of treatment, as well as to avoid rash measures on his own part, the surgeon should be aware of the condition and disposition of the spinal nerves in this complaint.

> "In spina bifida it appears that either part or all the filaments which form the posterior spinal nerves, corresponding to the solution of continuity of the vertebral canal, are distributed upon the internal walls of the tumour, and that they generally terminate there. These arise from the cord in various ways;

sometimes only by single filaments, which pass out of the aperture of the canal through the fluid contained in the tumor, unattached to any thing until they arrive at its parietes, where they are dispersed. This is particularly well illustrated by the drawing,* No. V. fig. 1; here we see two of the nerves arising and distributing themselves in this manner. Sometimes, again, the posterior spinal nerves come out of the opening in the canal, and instead of going straight through the fluid, pass round the internal surface of the tumor, and thus form a network of nervous filaments. Burgius mentions a case of this description, where the internal surface of the tumor was so surrounded by nervous columns and fibres, that it resembled the internal structure of the auricles and ventricles of the heart. In other cases there arises a kind of peduncle in the middle of the tumor, of a nervous mass, resembling a mushroom, of which the stalk is formed of filaments of nerves bound together by cellular tissue, and the head by their extremities spread out and ending upon the upper and internal surface of the tumor. Brunner has particularly taken notice of this variety of distribution; and from the drawing,† No. V. fig. 2, one would almost imagine he was alluding to the same case.

The posterior spinal nerves, which are distributed upon the internal walls of the tumor, do not always pass through the aperture connected with the vertebral canal; but sometimes they pierce as it were the tumor, and then distribute themselves on the internal surface. There are two preparations of this description in Mr. Llangstaff's Museum; in the one they pierce the tumor at its back part, and pass straight through the fluid; in the other they also pierce the back part of the tumour, but they immediately curl round its walls.

There appears to be some degree of regularity of the distribution of the nerves when spina bifida occurs at the upper part of the canal; for here the posterior nerves are only involved in the disease, whilst, at the lower portion, the whole cord is continually influenced by it. Thus we see in some cases only a few nervous filaments erring in their course, while in others we find the whole bundle of nerves, which form the cauda equina, going out of the canal and attaching themselves to the top of the tumor, and returning into it again, as may be observed in drawing‡ V. fig. 3.

Sometimes, again, we find that the whole of the medulla is brought out of its course through the aperture of the canal, and that it completely ends in the tumor, leaving the canal below quite hollow. Various authors, among whom are Brunner, Hoin, Apinus, and Sandifort, relate cases of this description; and, no doubt, if the owner of the preparation from which the drawing V. fig. 2, was taken, would permit a farther dissection to be made of it, we should find the canal of the sacrum quite hollow, and that the peduncle in the middle, and the nerves around, was the whole of the cauda equina terminating in the tumor; for it so exactly resembles that case before mentioned, described by Brunner, that one naturally would expect to find the same result.

It does not appear, however, that the medulla, or the lower part of the canal, always deviates from its course, or that the nerves are altered in their distribution; for it may occasionally be seen that no alteration whatever takes place, and that neither itself nor its nerves are changed either in their arrangement or in their structure. This is exemplified by drawing V. fig 4.§ Here we see the bundle of nerves, forming the cauda equina, following their usual course.

The medulla spinalis also in spina bifida, at the part where the malformation of the canal occurs, becomes changed in its structure in various ways; sometimes it has been found inflamed—sometimes not so large as natural—and sometimes

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* Vide Drawing in the Library of the College of Surgeons, and Preparation, Museum St. Bartholomew's Hospital.

† Ibid. ‡ Ibid. § Ibid.

of a firmer consistence; sometimes, again, it has been rendered completely soft—and at other times has been found altogether deficient." 25.

The remedial means proposed or adopted for this formidable complaint have been, ligature—seton—compression—and puncture with compression. The two former were proposed by Mr. B. Bell and Dessault; there are many obvious and serious objections to their employment. The two latter were recommended by Mr. Abernethy, and have frequently been employed. Compression is a palliative measure, and has proved no more. Puncture, with compression, appears to promise rather more, but we must not expect much from any treatment. A short time ago we saw a young girl, apparently, if our memory serves us, some fourteen years of age, who had had spina bifida since infancy. The tumour was in the sacral region, about the size of an orange but flatter, with thin but not inflamed parietes. The girl was in good health, though of strumous appearance, and seemed to suffer little inconvenience from the disease. We believe that compression and puncture had been tried, but latterly all applications were abandoned, and the tumour was not on the increase. We shall now mention some cases related by Mr. Stafford, as they will convey more information on such a point than descriptions.

Case 1. *Dec.* 10, 1826. Mary Cotterell, aged 11 days, has a large swelling situated over the whole of the posterior surface of the sacrum. It is 14 inches in circumference, tense, elastic, evidently containing fluid. The integuments on the right side are very much inflamed, and at several parts of it, points of ulceration have commenced. The child is healthy and seems to suffer little. The swelling was one-third less at birth, and has been daily increasing.

As the fluid must soon have escaped from the progress of the ulceration, the tumour was punctured with a needle. By the next day a few drops only of fluid had escaped, and a small opening was therefore made with a lancet, and about two ounces of straw-coloured serum drawn off. Sticking-plaster was applied over the opening. 14th. Tumour again punctured, and nearly three ounces of fluid discharged. 15th. Plaster removed, and two ounces allowed to escape—redness diminished, and integuments beginning to contract. 18th. Tumour more distended, and its parietes considerably thickened; two openings made, and a little blood discharged. 20th. Swelling almost as great as at first; small trocar introduced, and 4 ounces of bloody serum drawn off; parietes of tumour found very much thickened; child restless. 22d. Tumour less inflamed and distended; four ounces of thicker fluid, mixed apparently with pus, drawn off by trocar; two or three strips of plaster applied tightly over swelling, with roller round body. Child easier since 20th. 26th. Improved; tumour evidently decreased, and parietes thickening; almost all the fluid evacuated to day; it is fetid, with small flocculi—straps and roller re-applied. 28th. Two ounces of fetid fluid drawn off. From this time till the 8th Feb. small quantities of fluid were occasionally drawn off, fetid at first, thin and serous afterwards; the tumour decreased, its parietes thickened, and the child's health improved. On the 8th, the child was found to have pyrexia, with costive bowels. Aperients and antimonials were ordered, and in three days the child died in convulsions. The tumour was now only an inch above the level of the surrounding parts, and was nearly solid; the integuments were corrugated over it.

Sectio Cadaveris. "On making a division of the tumor, along the course of the spine, there was found to be a deficiency of part of the rings and spinous processes of the two last lumbar vertebræ, and the space had been filled up by newly-organized matter. The walls of the tumour, were from about half an inch to an inch and a half in thickness, in different parts of it. The cavity itself of the tumor was complete without any adhesions, and about two inches in diameter; its internal surface was very irregular, having a thickish coating of lymph upon it; besides which, two or three layers of organized matter could be peeled from the part beneath. Upon making a minute dissection of the neck of the tumour, two filaments of nerves could be traced through the newly-organized lymph from the medulla spinalis into the cavity of the tumor, as seen in the drawing, No. III.* The parietes of the tumor were condensed and thickened; and in the substance of the newly-organized matter were found little cavities, about the size of horse-beans or peas, containing a limpid fluid; and the skin covering the tumor was much corrugated and thickened. At the upper part of the tumor, immediately beneath the skin and cellular substance, were observed two or three strata of condensed membrane, about the thickness of a five-shilling piece; this is beautifully shewn in the drawing, No. IV.†; it had no doubt been the original boundary of the cavity of the tumor in which the fluid had been contained, and most probably was composed of arachnoid membrane and dura mater. From this original wall to the cavity of the tumor was the newly-organized matter, which, in different parts of it, was from half an inch to an inch and a quarter in thickness. On the right of this cavity there was another cyst, composed of a substance like thickened dura mater, about the size of a billiard-ball, quite impervious, and its internal surface smooth; the wall of this cyst could be traced into, and appeared to be a continuation of the external layer, or what would be the dura mater of the other tumor. This cavity was probably formed between the arachnoid membrane and dura mater, as on dividing the septum between the two, it was much thinner than the original parietes of the other cavity, and appeared to be bereft, as it were, of one layer of membrane.

Here we may observe that the process by which the soft parts become consolidated, is very gradual; before this tumor was punctured, its parietes were nearly as thin as a bladder, and were much distended, being fourteen inches in circumference. For the first three times after puncture the tumor became as much distended as before, and but little alteration of its walls was perceived; but upon the fourth, fifth, and sixth days, the parietes began to thicken, and at length to contract, and so on until the 11th of January, when the tumor was evidently much diminished in size, and the adhesive inflammation going on. From this time till the 1st of February, a gradual thickening of the parietes, and diminishing of bulk of the tumor, was taking place, when, in a few days, the child died of fever, and the appearance of the tumor was exactly the same as represented in the drawing No. II."‡ 41.

With respect to the treatment, and the mode in which that treatment operates, Mr. Stafford makes the following remarks.

"From the history and dissection of this case, as well as of those treated by Sir Astley Cooper and others, we may safely come to the conclusion that repeatedly puncturing the tumor, so as to let out the fluid as often as it collects, is the only mode at present known by which a permanent cure of spina bifida may be effected. Sir Astley Cooper used a needle for this purpose, though this method will not always succeed, as the fluid is so thick that it cannot pass through so small an aperture; under these circumstances it will be necessary to make a valvular opening in the parietes with a lancet, and when the fluid is evacuated, to close up the lips of the wound with adhesive plaster, so as to heal it up by the first intention. By this means also the air will be excluded, which is of the utmost consequence, for it has been observed that in almost all those cases in which the tumor has burst of its own accord, or the wound has not healed, the air being admitted, the patients have died very soon after;—a proof how necessary it is to use every precaution to prevent its entrance. After having evacuated the tumor, a soft linen compress should be laid upon it, and straps of adhesive plaster applied over this, so as to make gentle pressure, and a roller wound lightly round the body at first; and this pressure should be gradually increased till at length a truss may be applied, as in Sir Astley Cooper's cases. If, however, as frequently happens, convulsions are caused, or any other bad symptom produced, then pressure should be applied only to that degree the patient can bear. The tumor should be punctured every, every other, or every third, fourth, or fifth day, or indeed as often as the fluid collects; and it is advisable that this should be done before it arrives at its original size, for by the constant stretching of the skin it might lose its power of contractility, and the cure be retarded, or perhaps totally prevented." 42.

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* Vide Drawing in the Library of the College of Surgeons.

† Ibid. ‡ Ibid.

The general health of the patient should be attended to by general measures, dietetical and medical. The succeeding cases are intended to illustrate the palliative treatment and spontaneous cure of spina bifida. The palliative treatment, compression, produces general thickening of the parietes of the tumour, but exerts no further influence on its contents. The spontaneous cure is effected by the tumour becoming so large, that its distended parietes inflame, ulcerate in one or more parts, and so give issue to the contents. The walls then collapse—the aperture through which the fluid passes is closed by lymph and heals—the tumour again becomes distended and bursts—the parietes again collapse—and the wound heals again as before. This process is repeated as often as the tumour fills, and, during this time, coagulated lymph is thrown out from its internal surface, the walls become successively thickened, and at length they are consolidated. This process gave the hint on puncturing, which was adopted by Messrs. Abernethy and Cooper. But this remains to be observed:—when spina bifida is cured by art, hydrocephalus frequently ensues; when spontaneously cured in the manner described, Nature leaves an aperture covered by vesicles on the top of the tumour, and communicating with the canal. When fluid collects the vesicles burst, and it thus escapes, and obviates the danger of hydrocephalus. The rupture of the vesicles undergoes exactly the same process as the rupture of the tumour—they are distended, burst, and heal. It is a question whether, after spontaneous or artificial cure, the deficiency of bone is ever supplied by new osseous deposition. In general, it appears that it is not, and we possess no positive evidence to prove that it ever is so. We may now proceed to mention other cases.

Case 2. Alfred Church, aged two years and three months.

"There is situated on the lower part of the back, over the inferior lumbar vertebræ and superior portion of the sacrum, a tumor of firm consistence and of rather unequal surface, about the size of half an orange; it is moveable, and of a darker colour than the adjacent integuments; when pressed upon or moved, the fæces are instantly evacuated. The spine, above the tumor, is slightly curved outwards; the inferior extremities are singularly deformed, and can be twisted almost in any direction; the flesh is flabby. When sitting, the right leg rests on the outer or fibular side, and with the thigh forms nearly a semicircle; the left leg rests on the inner or tibial side, and the toes of both feet point to the right. The head is scarcely enlarged, and the skull is firmly ossified, except at the anterior fontanelle. His faculties are good, and he has only as yet cut six teeth. The testes still remain in the abdomen. The urine dribbles away as fast as secreted, and causes an excoriation of the prepuce and scrotum. He was born with an imperforate anus; an artificial opening was made into the rectum, through which the fæces are now voided. The nates are not, as usual, separated by a sulcus or division, but present a continuous surface. At the time of birth (which occurred between the seventh and eighth month) his mother states that there was a large soft tumor or bag occupying the site of the present tumor, and hanging considerably over the nates; his head was greatly enlarged (nearly as big as the rest of the body) and the integuments of the forehead hung over the face. The accoucheur made several punctures in the bag, and discharged much fluid; the contents were four times subsequently evacuated, at the interval of two or three days; the sac then sloughed off, and the fæces were evacuated through the ulcerated opening. The intestines could be seen through it. During the progress of the healing of this sore, much fluid constantly drained off for some months, and the size of the head gradually diminished, and now there are small vesicles on the top of the tumor, which occasionally break, and discharge a thin limpid fluid, and then heal. His mother attributes the malformation of his head and back to a fall she received when nearly three months gone with child, by which she struck the corresponding parts of her own body, and the deformity of the inferior extremities to her having been frightened, and thrown down, about a week afterwards, by a man who had a similar deformity of legs. After this she suffered greatly during the remainder of her pregnancy with severe pains in the head and back, and the weakness of her legs was so great as to prevent her standing.

This case is perhaps the most remarkable that ever occurred of spina bifida, as it combines in it almost all the facts of importance that have ever been recorded, both by the ancients as well as the moderns; first as to the immense size of the tumor;—secondly, as to its combinations; there was hydrocephalus of great magnitude—deformed limbs—deficiency of the nates, with imperforate anus, and diminished nervous power;—thirdly, as to the progress of ossification of the vertebræ; the rings were not only defective, but the bodies also, and the intestines could be seen through the tumor which communicated with them, as the fæces were evacuated through it;—fourthly, as to the subsidence of the hydrocephalus when the tumour sloughed off—the possibility of which fact has been doubted;—fifthly, as to the reason suggested by the mother for the origin of the disease;—sixthly, as to the spontaneous cure—another fact hardly credited;—and seventhly, as to its present state and the age of the patient." 51.

Case 3. May 4th, 1826. This child is four years and a half old, stout and healthy. Over the third lumbar vertebra is a tumour, equal in size to a pullet's egg, with rather a broad base, inflamed appearance, feeling solid, not diminishing on pressure, with a constant discharge of a watery fluid from an aperture situated on the top of it. The child suffers no inconvenience, and plays like other children. All that could be learned from the parents was, that the infant was born with a tumour like a bladder on the loins, that it grew, and in a few months burst. After this, the walls became thickened and hardened, and a watery fluid was constantly discharged from it. The child is now nine years old.

Case 4. —— Potter, aged three weeks.

> "There is a degree of disfiguration and swelling of the dorsal vertebræ and the integuments have ulcerated. The ulcer is as big as a shilling, but oval-shaped, and the surrounding integuments are purple. No spinous processes can be felt, and the transverse ones are widely separated, leaving a hollow cavity, over which the ulcerated integuments are stretched. During the first two weeks after the child's birth the inferior limbs were perfectly motionless, but since that period the toes have begun to move, and their motion has daily increased; so that if the sole of the foot be now tickled, it is very perceptibly felt. When the child was born, the mother describes the swelling to have had the appearance of a bladder filled with water. She did not perceive the precise time when the fluid was evacuated, but in a few days it appeared more flattened, and the ulceration then commenced. The child has all the appearances of health. The ossification of the occipital bone has been remarkably imperfect, not being larger than a shilling; so that the contents of the cranium, from their gravity and want of resistance, give the head a very oval form." 54.

The ulcer was dressed simply, and pasteboard applied to the head. The sore healed, and the spinal cavity became covered with a firm skin. Hydrocephalus now came on, and the child died with its usual symptoms. On dissection, the cranium was found very considerably increased in its dimensions, the ventricles so much distended with water, that in some places the medullary matter forming their walls was altogether wanting. The brain was very firm; on the choroid plexus was a fine hydatid. On examining the tumour of the back, the spinal canal was obliterated, excepting a small portion where the separation of the vertebræ commenced. The integuments were adherent.

We have dedicated more space to the consideration of this part of the volume, than practical men might, perhaps, deem necessary. But the nature and treatment of spina bifida are not so well understood as they should be; and possibly the information actually obtained is not universally diffused. Any little addition to our knowledge is, therefore, desirable on the one hand, and a free dissemination of it is useful on the other. The following short summary may be added.

> "As the radical cure of spina bifida is always attended with some degree of danger, there are, perhaps, some cases where we should not be warranted in attempting it. If the tumor is small, and does not increase in size—if its parietes are not inflamed, and it is not painful—if the health of the patient be good, and he suffers no inconvenience from it—then, perhaps, the palliative treatment may be most judicious; but if, on the other hand, the tumor is increasing in size, or its walls are inflamed or painful, or the constitution is suffering from local irritation, the radical treatment for the cure of this disease is most advisable.
>
> There are some cases where, from bad symptoms and a complication of diseases, there is scarcely any hope of cure; such as when they are accompanied with hydrocephalus, bursting of the tumor, and paralysis of the lower extremities. It is true that in two former instances a cure has been effected, but they may be almost considered as exceptions to a general rule. In these cases, where the patient cannot recover, the only course is to use palliatives, and to make the way as easy as possible to the grave." 56.

ON THE INJURIES OF THE SPINE.

Much has been said on these injuries by experienced surgeons, and few in the ordinary pursuits of their profession fail to meet with cases of the kind occasionally. It is incumbent on practitioners to understand their nature and treatment. The chief injuries of the spine are concussion—fracture—dislocation.

Concussion. In complete concussion we have complete paralysis of the parts supplied by the nerves which arise below the affected portion of the medulla. In partial concussion the corresponding paralysis is partial, and in cases of this kind we find many singularities, if not anomalies. Of the possibility of meeting with such the surgeon should be aware. An explanation seems to offer itself in the supposition that the medulla may be more or less generally shaken, and in addition to this, that the origins of particular nerves may be more particularly injured. Thus occasionally there is paralysis of parts above the injury, as well as below it. This is explicable on the first supposition. Mr. Stafford mentions this case. A man received a violent kick from a horse on the most projecting point of the dorsal vertebræ. He was immediately paralysed in the lower extremities, and the arms lost all power of motion with partial loss of sensation. Under such circumstances, the upper extremities usually suffer less than the lower at the time, and recover with more rapidity. All the parts below the injury are not always paralysed; of this Mr. Stafford mentions an instance.

Case. A pack of goods struck a man between the scapulæ, at about the seventh cervical and first and second dorsal vertebræ; the arms were immediately and totally paralysed, and there was partial loss of power in the muscles of respiration. Neither the inferior extremities, the bladder, nor rectum were at all affected. Probably the origins only of the nerves supplying the arms were injured. We had under our charge at St. George's Hospital a case of partial paralysis from concussion of the spine.

Case. A young woman was flung out of window by her gallant. She was admitted into the hospital immediately afterwards, complaining of great pain in the dorsal and lumbar region, and loss of power over one lower extremity. Next morning there was loss of power of motion in the thigh, and numbness in the natis of that side. There was paralysis of the bladder, and great torpor of the rectum. Under cupping and antiphlogistic treatment these symptoms were in a few days nearly removed. The following is a curious case, though not fairly introduced under the head of concussion.

"Oct. 1831.—About eight years from the above date, a man, belonging to the town of Penkridge, in Staffordshire, fell from the top of a waggon-load of hay. He was taken up in a perfectly helpless state, and was immediately carried to bed: he had struck his back upon the second, third, and fourth lumbar vertebræ, which were considerably displaced laterally, the body leaning to the right side, leaving but little doubt that the spine at that part had suffered fracture. He was perfectly paralysed below the injury; the fæces escaped involuntarily, and the bladder could not expel its contents; the arms likewise were partially paralysed, in both the powers of feeling and motion. The treatment of the case I am unacquainted with, but he has kept his bed ever since, and his present state is as follows:—The muscles of the right arm are so contracted that it is closely fixed to the side; the forearm from the same cause, rests upon the humeral part; the wrist is bent on the forearm, and the fingers are firmly clenched in the palm of the hand; the sense of feeling also is partially lost; the left arm is affected in the same manner, but not in so great a degree; the right leg has both the power of motion and feeling; the left leg has the power of feeling, but not that of motion; the sphincter muscle of the rectum remains paralysed, the fæces still escaping involuntarily, and the bladder only expelling half its contents." 61.

We proceed to Mr. Stafford's description of the effects of concussion of the spine.

"The patient immediately after the injury, as in all cases where the nervous system has received a violent shock, becomes almost lifeless—a marble coldness pervades the whole frame, but more particularly the paralysed limbs. He cannot lie in any other position than on his back;—his pulse is weak and faltering; and he is frequently almost unconscious of what is passing around him. In fact the whole frame is in a state of collapse: in this situation he remains for a few hours, when reaction gradually commences. The warmth of the body returns until it amounts to a state of fever. The pulse rises, becoming quick, hard, and full; the tongue is furred, and great thirst is felt. The patient has more or less pain in the injured part, and sometimes delirium supervenes. If the injury be received high up, there is dyspnœa, in consequence of the muscles of respiration being paralysed, and, as I have before stated, the parts below suffer paralysis, according to where the injury was received.

Although the above symptoms commonly happen, yet they do not invariably occur; the pulse does not always become quickened, nor does it always become increased in fulness; it not unfrequently remains stationary without any perceptible change from the natural standard of health: it sometimes even becomes slower than natural, being reduced in beat as low as 60, or even as 40. The temperature of the body likewise does not always increase; the animal heat may be much the same as before the accident took place. In many instances also, if a thermometer be applied to the paralysed extremities, they will be found to be some degrees lower in temperature than those which do not suffer from the injury.

There are other symptoms besides the above consequent upon injuries of the spine. The bladder is not only paralysed, but the urine contained in it generally becomes decomposed, and fœtid and calcareous matter is frequently deposited. From this cause the mucous surface often inflames and ulcerates, by which the death of the patient is accelerated. This is a very curious fact; for it would appear from such a circumstance that the nerves of the organ had some influence over its contents. Thus, if from any cause the bladder loses its power, from a deficiency of nervous influence, the urine immediately upon being secreted from the kidney, undergoes, in some measure, that change which it would do when it has entirely passed from the body. It would seem therefore, that when the energy of this organ is diminished or entirely lost, that it resembles in some degree an inanimate vessel. It would not be possible to account for these symptoms unless the nerves had some power over the contents of this organ, which would prevent decomposition." 65.

This is not only an imperfect, but an erroneous description of the alterations which take place in the urine and urinary organs. From Mr. Stafford's observations the inexperienced reader would be led to imagine that all the changes in the urine occur in the bladder, from the loss of its regulating or antiseptic powers. Mr. Stafford does not mention the alkalescence of the urine, which does, however, in general, take place. Now the urine, in many cases at the very least, becomes alkaline or is secreted so in the kidney, and that this is the case in the present class of instances is proved by the fact that alkaline urine is obtained if a catheter be left continually in the bladder. When this is done no collection can take place in this receptacle, and the fluid is obtained as sent down from the kidney. The alkaline urine contains the triple phosphate, a salt which is well known to be formed in the kidney. The alkaline urine becomes, however, a source of irritation to the mucous membrane of the bladder, which falls into a state of chronic inflammation: adhesive mucus is then secreted, which, mixed with the triple phosphate, often constitutes a sort of alkaline glue at the bottom of the urinal. It is very probable that phosphate of lime may now be secreted by the bladder, increasing the alkalescence of the urine. These changes will readily be understood by those conversant with the morbid chemistry of this important excretion. We have not space to pursue the subject further, and we trust that at no distant period of time, the injuries of the spine will be treated of by one who is well able to do justice to any practical subject, we allude to Mr. Brodie. This distinguished surgeon has already favoured the profession with a paper on the primary effects of injuries of the head, but he yet owes us a debt which, importunate and clamorous though we may appear, we beg to remind him of—the sequence of that paper. In the mean time we correct Mr. Stafford on a point in which he has evinced some sins both of omission and commission.

Another symptom is torpor of the bowels, owing greatly, no doubt, to paralysis of their abdominal muscles, if not of their own: and flatulency, owing partly to the constipation, partly perhaps to diminution of the nervous influence by which the living gut controls the chemical decomposition of its contents. However this may be, the facts are as stated. Priapism is well known to be another occasional consequence of injuries of the spine. It has been attributed to concussion of the cerebellum, a gratuitous speculation.

The prognosis of concussion of the spine must depend on the seat of the injury, and its extent. The first is ascertained by inquiry and inspection, the second by the symptoms.

"The treatment of concussion of the spine must be adapted to the three different stages in which it presents itself to our notice. 1st. That immediately after the receipt of the injury; 2d. The inflammatory stage; 3d. That when the active symptoms have subsided. In the first stage, immediately after the receipt of the injury, the patient is usually so exhausted from the violence of the shock, that he is in a state of collapse. All that can be done at this time is, to place him on his back in a warm bed, and to administer stimulants, such as brandy, camphor, carbonate of ammonia, &c. until reaction commences. When reaction has taken place, antiphlogistic measures should be immediately resorted to. If the fever runs high, and the pulse be quick, full, and hard, the patient should lose blood from the arm. If, however, the symptoms are not sufficiently violent to demand very active treatment, he should be repeatedly cupped opposite the injury, purgatives also should be given, first to act briskly, then moderately upon the bowels. The feverish symptoms will be best allayed by the exhibition of antimonials combined with nitre, and small doses of saline purgatives. When the activity of the inflammation is diminished, blisters may be applied (and repeated as often as the preceding ones have healed) on each side of the spine, with the greatest advantage, until all inflammation has entirely subsided. During the treatment the patient should take nothing but farinaceous diet, and it is of the utmost consequence that the spine be kept as still as possible, for each movement, by increasing the inflammation, must necessarily diminish the progress towards cure. To effect this, the double-inclined plane-bed, invented by Mr. Earle, will be found of the greatest service, as when the patient is placed on it there will be no necessity for him to be moved, either to perform the natural evacuations, or to have those means employed which are necessary to the restoration of his health.

In concussion of the spine, the muscles of the rectum are usually either so paralysed that they have no power to act, or that the fæces escape without their being able to control them: in the former case injections must be used. The bladder likewise is unable to expel its contents. A catheter in most cases must be passed at least twice in the day; or as often as a sufficient quantity of urine is secreted.

It often happens that patients who have had bad concussions of the spine recover to a certain point, and yet do not get quite well; that is to say, they have either an imperfect power of motion, or an imperfect sensation. It is difficult to say exactly from what this arises, but it is most probable owing to chronic inflammation, or to some alteration of structure of the medulla, in consequence of the injury. It should be treated, however, according to the symptoms. If pain still exists in the injured part, the means employed should be the same as in diseases of the spine. The patient should constantly lie upon his back, counter-irritants should be used, by repeated blisters, the moxa or issues, and the general health should be attended to. If, however, there is no pain, and there is reason to believe that the defective power arises rather from weakness than from any other circumstance, then stimulating the part will be the most likely means of restoring the lost powers, and the best means for this purpose will be friction on the spine and limbs, stimulating liniments, shampooing, electricity, and galvanism, and if the power of movement alone be defective, then the limbs affected should be made to undergo certain exercises calculated to restore them." 72.

We would not recommend practitioners to be so much alarmed about the stage of collapse. It is with injuries of the spine, as with those of the brain, in this particular. If the injury is remediable the collapse is very seldom, very seldom indeed, so profound as to inspire serious and just alarm, or require stimulants which may afterwards be injurious. If the injury is so severe as to occasion a collapse that will prove fatal, that injury will kill in spite of all our cordials. We would not be mistaken. We do not affirm that patients *never* sink from collapse independent of lesions which must necessarily be mortal, but we affirm that they very rarely do so, and we confess that we never saw an instance of the kind. But we do say, that for collapse as it usually presents itself, no stimulating treatment is necessary. Warmth and the bed are all that are required, and if more active measures are unnecessary they are likely to be injurious. Mr. Stafford relates two cases; we shall take one. Previous to this we shall give the cadaveric appearances in those who die from concussion of the spine.

"The parts exterior to the osseous canal are much contused, and sometimes blood is found extravasated in the cellular membrane. The membranes of the medulla spinalis are in a high state of vascularity, opposite to the point where the blow took place, and occasionally one or more of them are ruptured. There is also more or less blood, either coagulated or not, between the dura mater and osseous canal, the dura mater and arachnoid membrane, the arachnoid membrane and pia mater, and sometimes between all at the same time. When the patient dies immediately after the accident, the medulla spinalis is generally of its natural colour and texture, but now and then it is rather redder, and if minutely examined through a magnifying glass, the capillaries ramifying upon it may be seen injected with blood. When the death of the patient has been delayed, it is not uncommon to find it of a yellowish red colour, and of a softer consistence, and in some cases where there has been much inflammation, it is rendered into a more fluid state at the part where the concussion took place. Occasionally it is observed that the inflammation of the injured portion has extended itself along its own substance to the brain, as well as along its membranes, to those of that organ, and in this case there is a quantity of fluid found in the vertebral canal." 79.

We cannot look upon the foregoing chapter on concussion, as either displaying all that is known on the subject of concussion of the spine, or even as evincing method and precision. After injuries of the spine we meet with two series or orders of symptoms; the one immediately consecutive to the injury, and expressive of its charater and extent, the other arising after a certain interval, and dependent on chronic inflammatory action set up in the medulla, its membranes, or even in the spinal column. These have not been well separated and discriminated by Mr. Stafford. But to pass to one of the cases.

Case. James Liddy, æt. 30, admitted into St. Bartholomew's Hospital Feb. 5th, 1830.

About the middle of January, after throwing himself from a wall 12 feet high, he immediately found a sensation of chilliness, pricking, and partial inability to move the right leg; he was likewise unable to make water or retain his fæces. Previously to his admission he had taken some medicines, which had been of no service. On his admission, he complained of considerable pain in the lumbar region, increased by tapping the spinous processes, and pain along the anterior and upper part of the thigh, in the inguinal and hypogastric regions, with some swelling in the groin. He was cupped and twice blistered, with such relief, that on the 13th he was able to leave the hospital. On the 20th he returned, with considerable uneasiness in the leg, thigh, and hip, with disposition to sickness and thirst. He was bled to 16 ozs. took laudanum in an effervescing draught, was blistered and cupped. After this treatment there remained but slight uneasiness in the right thigh and knee, with an inability to rest the heel on the ground. On the 9th March, a moxa was made in the lumbar region, and soon afterwards he voluntarily left the hospital. After this Mr. Stafford has made some mistake in the dates. It seems that he was again in the hospital, and left it in September, with the action of the bladder still imperfect, and a slight pain in the thighs. He now pursued his occupation—that of a corn-porter, when he soon became worse. In December, apparently, he returned, with complete incontinence of urine, some difficulty in retaining his motions, pain on pressure in the lumbar region, and also along the inner side of the thighs, with great tenderness on pressure. His general health was good, but he did not sleep well. He was put on milk diet, ordered to keep the horizontal posture, two moxas were applied to the lumbar region, and some physic given. The dribbling of urine, and feeling as if he wished to void it, continuing, a catheter was passed, and about a pint of healthy urine drawn off; there was a slight stricture about three inches from the orifice of the urethra. He was ordered to wear an elastic gum catheter plugged, and to have the water drawn off every four hours. On the 6th Dec. two moxas were again applied. On the 10th, he complained of great increase of pain in the thighs, extending also to the calves of the legs. Eighteen leeches were applied to the thighs with much relief. On the 18th, the pain in the legs was very severe, and the same application was made to them with some success. On the 1st of January, a blister was applied, with good effect, to the left calf for pain there. He could now bear pressure on the spine without pain, but complained of cold and shivering. On the 1st February he was in good health, but did not sleep well; the urine was passed three or four times daily, but only at the water-closet, and he always felt a desire to pass more; he introduced the elastic catheter every evening, and drew off half-a-pint of healthy urine; there was no difficulty in retaining the fæces. In this state he left the hospital, with the moxas not yet healed.

FRACTURES OF THE SPINE.

Under this head we find nothing very new or instructive, but some cases are related which are worthy of extraction, for facts are the matériel of medical science. In order to shew that fracture of the spinous processes of the vertebræ is frequently recovered from, we have two cases related.

Case 1. "In the month of December, 1820, a soldier, belonging to the North Gloucester Militia, was at work in an excavated stone pit, when the roof gave way, and fell upon his back. He was immediately dragged by his fellow-workmen from the stones and mould which were upon him, and was carried home. He was examined, and it was found that the spinous point of the first lumbar vertebra was not in a regular line with the others; it was depressed, and fractured. The man had complete paraplegia below the injury, and the bladder and the rectum were also paralysed. When reaction was established he was bled largely, and powerful doses of purgative medicines were administered, in every form and dose, together with the employment of purgative clysters, but with no effect, until the eighth day, when the torpor of the bowels was overcome. He was now unable to retain the fæces, and they made their escape involuntarily. His bladder also still remained paralysed, and it was necessary to relieve it constantly by the catheter. He continued in this state for three months; at about which time sensation began to return, with pricking and shooting pains in the limbs, and shortly afterwards he perceived he could move his legs slightly backwards and forwards. In six months both these powers had so increased that he could walk with crutches, and in twelve he could go about without any support, and all that he suffered from was weakness in the limbs. The bladder and rectum gained their power also, in the same ratio as the other paralyzed limbs. When I last saw him, the parts over the injury were much thickened and consolidated. It is probable that there was more injury in this case than fracture of the spinous process; but this can only be proved by the examination of the parts after death.

Case 2. A man was admitted into St. Bartholomew's Hospital for an injury of the back, but he had no symptoms whatever of concussion of the spine. There was, however, an irregularity of the lower spinous processes of the dorsal vertebræ, and it was found that the tenth was flattened and depressed. The part was cupped and fomented, and aperients administered. In a month he went away quite well." 86.

Sir Astley Cooper has shewn that Nature is capable of repairing fractures of the vertebræ as of other bones, in fact, there can be little doubt that the fracture itself is of comparatively little moment; it is the implication of an organ so important as the medulla, which confers upon it the seriousness and danger which attend it. Mr. Stafford gives the brief particulars of two cases, calculated, in a high degree, to teach caution and gentleness in the handling of patients who have suffered from fracture of the spine.

Case 1. "July 25th.—A man having received a kick from a horse, upon the back of his neck, became instantly paralyzed in all parts of the body below the injury. He was immediately carried to St. Bartholomew's Hospital, and in about twelve hours after the accident delirium came on. The surgeon desired that the head might be shaved, in order that the proper remedies might be employed. In doing this, the barber turned the head a little on one side; the patient instantly fell from under his hand, and expired. Upon examination it was found he had fractured the third cervical vertebra, and that the sharp point of the fracture had pressed upon and wounded the medulla.

Case 2. A man fell from a great height, and broke his neck. An officious nurse, in moving him up, as she thought to relieve him, let his head fall backward. He instantly expired. He had fractured the second cervical vertebra.

Both of these cases occurred to my own knowledge, and from them it may be seen how necessary it is to keep the spine quite motionless, and more particularly when the accident happens in the neck. As soon as the patient receives the injury, he ought to be placed on one of the double-inclined plane beds, upon his back, and he should never, if possible, be moved, until there is sufficient reason to believe the fracture is united." 95.

We pass over some cases of fractured spine, and merely insert the morbid appearances observed after these injuries.

"When only simple fracture of the spine takes place, the morbid appearances are generally the same as in concussion; but if there is a complication of injuries, such as depression of the bone, &c. or there is dislocation of the vertebræ from one another, then it is found that compression, contusion, or either total or partial laceration of the medulla spinalis, may be produced. When the medulla is compressed, it does not always follow that there should be any difference from concussion in the morbid appearances, although most generally it is found that either some of the membranes are torn, or there is an extravasation of blood in the canal, and the medulla itself is much redder than usual. When the medulla spinalis is contused, it is usually found to be soft and disorganised; being occasionally streaked in its external substance with coagulated blood, and in one instance, mentioned by Sir E. Home, a clot of blood was found in its centre.

The membranes may be ecchymosed, ruptured, or have coagulated blood between them. If long after the injury, the medulla may be changed both in colour and structure, being in the one of a yellowish, red, or grey, and in the other much softened. Laceration of the medulla almost always occurs when there is fracture with dislocation, or when there is dislocation alone, and it may happen even under any circumstances, when there is displacement; the medulla, in these cases, may either be partially or wholly lacerated, and generally its membranes are torn, and blood is effused in the vertebral canal." 107.

The fourth chapter treats of dislocations of the spine. These are so rare, that Sir A. Cooper never saw an instance of the accident. When dislocation does occur, it is, from obvious reasons, more likely to take place in the neck than in any other part: elsewhere, indeed, it may be looked on as impossible. The most usual seat is between the atlas and dentata. J. L. Petit relates a case, which is also quoted by Boyer, where the only son of a tradesman went into his neighbour's shop, and playing with his infant son, lifted him from the ground, by putting one hand under his chin and the other on the back part of the head, by which he dislocated his neck, and the child instantly died. The father in his passion pursued the unfortunate homicide, and threw at him a saddler's hammer, the sharp point of which penetrated between the first and second vertebræ, and divided the medulla spinalis, and killed him upon the spot also; and thus, as he remarks, they both perished from nearly the same accident. Mr. Stafford relates a case which occurred at St. Bartholomew's Hospital.

Case. A bricklayer ascending a ladder, at a great height, lost his hold and fell upon his head. He was taken up dead, and conveyed to the hospital. On examining the spine, it was found that he had dislocated the first vertebra from the second, the ligaments of the processus dentatus being torn. Mr. Stafford relates three cases, to prove that dislocation of the cervical vertebræ, lower down, can and does take place; they are interesting, and deserve to be recorded. In all, the dislocation appeared to have been effected by the neck being bent forward to an extreme angle, so that the articulating surfaces were dislocated and the ligaments torn.

Case 1. "A man was working upon the roof of a house, and, having lost his balance, fell upon the pavement with his head foremost, and bent his neck forward to an extreme angle. He was taken to the hospital. Some displacement was observed between the fifth and sixth vertebræ; and the upper part of the column was protruded a little more forward than the lower. He had paralysis of all the parts below the injury. The usual remedies were employed, but he died in a fortnight. It was found that there was a proper dislocation of the fifth vertebra from the sixth; but that neither the articulating processes, nor the rim of the body of the vertebræ were fractured.

Case 2. A man also fell from a height, and bent his neck forward to an extreme angle. He died, and it was discovered that he had dislocated the fifth vertebra from the sixth, without fracture of any part of either of them." 113.

Case 3. Charles Butcher, æt. 22, Jan. 8, 1827. Is a stout muscular man, and, while descending a step about two feet in height, with a barrel (1 cwt.) upon his shoulder, he fell upon his buttocks, the barrel resting on the back of the head and upper part of the neck. He was brought to the hospital forthwith. He was perfectly sensible—there was total loss of sensation and voluntary motion below the neck—respiration performed solely by the diaphragm—pulse weak and slow—body cold—priapism. He was placed on his back in bed, and, there being reaction in the evening, he was bled to 16 ounces, and a dose of calomel and jalap was prescribed; four ounces of urine were drawn off by the catheter. On the 9th, he complained of pain in the lower part of the neck—respiration slower—slight power of motion in the arms—a little feeling in front of the chest—pulse full—heat diminished—fæces dark and offensive and passed involuntarily—a catheter introduced, but only a table-spoonful of urine drawn off; in the evening six ounces of high-coloured urine were abstracted. He slept during the night and felt better next day. The pulse and temperature of the skin remained the same—there was a tingling sensation in the hands, and sensation in the upper parts of the arms and thighs—priapism continued more or less—the fæces had been discharged involuntarily—and he complained of distention of the bladder. Eighteen ounces of high-coloured urine were drawn off; it deposited on cooling a small quantity of dark brown sediment. On the

11th he was worse—the countenance unfavourable—tongue brownish, and dry in the middle—fæces passed involuntarily—slight sensation still in arms and legs—thought he could walk home and asked for his clothes to dress himself. Six ounces of lighter coloured urine were drawn off. After this he sank rapidly, the priapism continuing, and died on the morning of the 12th. On examination there was found complete dislocation of the fourth cervical vertebra, its inferior oblique processes having passed in front of the superior oblique processes of the fifth; its body, separated at the fibro-cartilage, stood over that of the fifth by its whole depth. No mention is made of the state of the medulla or of other parts.

The succeeding chapters from the fifth to the tenth, including both, are occupied with the consideration of the diseases of the vertebral bones and intervertebral cartilages. After the many excellent monographs which have been published, it cannot be supposed that Mr. Stafford could offer much novelty on such a subject. He has not, and all we can do is to select here and there a passage conveying some new view, or interesting fact. We will take the following remarks on the cancellous structure of the spinal bones.

"It may be observed, that upon breaking the substance of the body of a vertebra in a fresh subject, the cancelli are found to be composed of thin transparent plates, and of round pillars of bone, both of which arise from the internal surface of the external plate surrounding the body, and are irregularly disposed and connected one with the other, throughout its whole substance. These plates are slightly transparent, and between their interstices is deposited an oily unorganized matter, which answers to the marrow in the long bones. When the phosphate of lime is dissolved by diluted nitric or muriatic acid, the bone is rendered soft, and the cancelli become quite transparent: they still retain their reticulated appearance, but their substance is so pliable that it resembles sponge, and can be compressed into a very small compass. Upon a closer examination of the cancelli in this state, they are found to be of a membranous structure, having a smooth, shining surface, on each side of them, with rounded edges, and being of a dense, tough consistence. Hence it would appear, from the common character of membranes being smooth on one side and rough on the other, that they are composed in their natural state of a duplicature of membrane, with phosphate of lime either deposited in their texture or on their surfaces.

Having so far shown by this description that the cancelli are of a membranous structure, I shall now endeavour to prove that they resemble other membranes in their functions as well as in their diseases. They possess the power of secretion as other membranes; for instance, they secrete phosphate of lime, and the oily matter deposited between their interstices. That the phosphate of lime is a mere secretion, is proved from the fact, that its quantity is increased or diminished according to the healthy or unhealthy state of the membrane, as may be seen from its deficiency in rickets and scrofula. In rickets the earthy matter is almost entirely absorbed, and the cancellous membranes are left uncovered by it. The same takes place in scrofula; the bone becomes softened, that is to say, the action of these membranes is changed; they do not secrete phosphate of lime, but an albuminous cheesy matter. In rheumatism the contrary takes place: there is more earthy matter secreted than ought to be, and the bone is rendered hard. These facts are illustrated by many preparations preserved in museums. The membranes of the cancelli also secrete an oily matter, which is lodged between the interstices. This oily matter is frequently entirely wanting in affections of the spongy texture of bones, and in scrofula its place is supplied by an albuminous or caseous matter, (a secretion peculiar to this disease,) which proves that the action of this membrane is altered, and that the natural secretion must have been previously absorbed.

Although the membranes of the cancelli no doubt are of a character *sui generis*, yet from the diseases which affect them they appear more to resemble the serous and synovial membranes than any. Both of these are liable to scrofula; so is the cancellous structure, and the matter secreted is the same in all. They are also affected by rheumatism, by the action of mercury, and by the venereal disease: so are the membranes of bone. A greater proof, however, of their resemblance is, that serous membranes sometimes secrete phosphate of lime. As a proof of this, I have frequently inspected bodies where I have seen bony matter deposited on the dura mater of the brain, the arachnoid membrane of the spinal marrow, on the pleura, pericardium, peritoneum, &c." 120.

We think it very probable that a membrane does exist in the cancellous tissue of short and flat, and the cancellous extremities of long bones, although its existence has been denied, if we remember right, by Bichat. But we think the analogy between this membrane and the synovial is too loose; it is more allied to the medullary system of the long bones, a system sui generis. That bone is secreted by it, or rather by the vessels which it supports, is very likely, and as rickets consists of a diminution of the secretion of the phosphate of lime, that disease may be deemed in some sort an affection of this membrane. But rickets is undoubtedly a constitutional disease, and that it is not essentially a spinal complaint, as Mr. Stafford imagines, is proved by the rickety alterations of other, and especially of the long bones.

Our readers are, perhaps, aware, that abscesses are occasionally found in the ends of long bones, as the tibia, and very serious complaints they are. Mr. Brodie has once or twice trephined the bone for symptoms of this complaint, and evacuated the abscess with success. But this by the way. There is a preparation of abscess in the substance of the bone of the sacrum, in the museum of St. Bartholomew's Hospital. The history of the case is unknown.

Ulceration occasionally takes place in the substance of the bony arches of the vertebræ. Practitioners should be aware of this fact.

"Although it does not commonly happen, yet in some cases ulceration of the rings of the vertebræ takes place. There is a preparation of this species of the disease in the spine in the museum of St. Bartholomew's Hospital. Here the ulceration began in the back part of the rings of the dorsal vertebræ, and a portion of the bone is separated, and pressing upon the medulla, while the bodies are perfectly sound.

In the museum of Guy's Hospital also, there is a preparation where an abscess is connected with the vertebral canal. It appears in this case that the rings of one of the dorsal vertebræ is ulcerated, from which there is a fistulous passage leading from the vertebral canal to a large abscess in the back. This narrow passage is partly filled up by caseous matter, which proves it to have been a scrofulous abscess, arising in consequence of diseased bone, and connected, owing to the ulceration of the ring, with the vertebral canal." 149.

An interesting case of complicated luxation, from disease of the atlas and dentata, has been given to our author by Mr. Lawrence, and is related under the head of disease of the articular joints. If we are not much deceived, this case was published by Mr. Lawrence in the Medico-Chirurgical Transactions, and noticed at the time in this Journal. We will not, therefore, again refer to it. From the chapter on angular curvature of the spine, we only think it necessary to make the following extract, illustrative, we imagine, of the providential solicitude of Nature to guard her children, even in the midst of distempers and diseases. The good effects resulting from the following constitution of parts, during and after a morbid process, are sufficiently apparent.

> " With regard to the curvature of the spine, it may be considered as a general law, that the medulla takes its course along the greater angle; that is to say, it follows the curve of the rings of the vertebræ rather than that of the bodies. It may be observed, also, in most of the morbid specimens of this disease, that the vertebral canal, where the curvature takes place, is even larger than natural, and that the projecting points of the broken-down vertebræ are absorbed, and rounded off. In some cases, no doubt, where only one or two bodies are rapidly destroyed, and the angle is very acute, the bones may press upon the spinal cord, but in the majority they do not, and even in those where they do, if the patient lives long enough, there is but little doubt they are in general gradually smoothed down by absorption.
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> The state of the medulla itself, if examined after death at the part where the curve takes place, varies; sometimes it does not in any way deviate from health, the structure, both of the medulla and its membranes, is natural, while at other times a considerable degree of disease may have gone on. The membranes may be thickened, matter may be formed pressing upon them, or between them, and the medulla itself may be reddened, or partially softened, or softened in such a manner as to be almost in a fluid state. In these cases the paralysis below is usually complete." 167.

After enumerating the symptoms usually observed in ulceration of the vertebræ and intervertebral cartilages, Mr. Stafford properly observes that we must not be surprised at their absence in cases considerably advanced. There is no novelty in this remark, but there is truth, and truth so serious as to merit great attention on the part of practitioners. We recollect a striking instance of the fact, of which, indeed, we have seen several. A young man complained of some obscure pains about the hip-joint, without other evidence of organic disease in that articulation. Struck with this circumstance, we examined the spine very carefully, but detected no irregularity, no decisive tenderness on pressure, no appreciable functional disturbance. The patient had a fistulous opening in the integuments, under the right pectoral muscle, which was concluded, from its aspect, to lead to carious or dead rib, though no exposed bone could be felt with the probe. He was attacked with erysipelas around this ulcerated opening, and symptoms of latent pneumonia supervened about the fourth or fifth day. In thirty-six hours he died. On dissection, recent pleuro-pneumonia of the right side of the chest was found to have been the immediate cause of death. As had been suspected, two or three ribs were partly carious, partly dead. But this was not all. Between these carious ribs and the pleura costalis, which was thickened, chronically inflamed, and separated from the side, was a widely-diffused abscess. This passed backwards to the dorsal vertebræ, a great many of which (we now forget the precise number) were more or less ulcerated, with correspondent affection of the intervertebral cartilages. The hip-joint, to which the sympathetic pain had been referred, was healthy. We may insert some other instances of a similar description related by Mr. Stafford.

> " Notwithstanding, however, all the symptoms here enumerated, so insidious is this disease that I have sometimes known angular curvature to occur without a single indication of it, as far as the health was concerned. A child, for in-

stance, shall play about as usual, without its parents remarking any change in it; it shall have a good appetite, sleep well, &c. and yet ulceration of the bones shall be going on, which shall not be discovered until anchylosis of the part has taken place. I recollect a case of this description happening in a little boy of my own acquaintance. He had always been from his birth more lively and active than usual, and never had any illness to speak of. By mere accident his father discovered that he had an angular curvature of about two or three of the vertebræ, which had firmly anchylosed.

The completeness and incompleteness, also, of the symptoms, very much depends upon the rapidity with which the curvature takes place. If the destruction of the bodies of the vertebræ has been very quickly effected, the paraplegia is usually more complete; but if it has been slow in its progress, the paralysis below is frequently very imperfect. It is only astonishing in some cases how much mischief may occur to the vertebræ, both as to the extent of the curve and the acuteness of it, without the symptoms of pressure upon the medulla being produced. I have frequently seen six or eight of the bodies of the vertebræ destroyed without a single symptom as to the loss of the power of motion or feeling to denote it. I have at this present time a case of a child under my care, in St. Mary-le-Bone Infirmary, where at least six of the bodies of the dorsal vertebræ have been destroyed by caries, and the angle of the curve is very acute, and yet no paralysis has ever occurred. Such a phenomenon can only be explained by the very progressive and slow manner in which the alteration of form takes place." 185.

The directions for the treatment of the disease are judicious; but as most of the items are familiar to well-informed practical surgeons, we think it necessary to make but one extract. It shews that, possibly, the horizontal posture may be too assiduously maintained, or, at all events, that the injudicious extension sometimes resorted to by medicasters and quacks is not altogether devoid of danger.

"As the curative process by which the destruction of the bodies of the vertebræ, and that of the intervertebral substances, can only be effected by the anchylosis of the superior with the inferior portion of the spinal column, it may be advisable, perhaps, to assist the diseased parts in anchylosing. Instances have been known, one of which is shewn in a preparation in the Museum of St. Bartholomew's, where several bodies of the vertebræ have been destroyed, and where the two diseased extremities have not come in contact with one another, so that a large gap has been left between them unoccupied. This has been attributed by some (and it certainly is a very rational conjecture), to the patient having lain too long in the horizontal position; thus it has been impossible to approximate the two extremities. Whether this really is the cause, or whether it arises from the rings of the vertebræ and their articulations having sufficient strength to bear the weight they have to sustain, is uncertain. From whatever cause, however, it may arise, it appears to point out the necessity of our assisting the anchylosis of the two separate parts, which can only be effected by gradually allowing the upper part by its own weight to fall upon the lower part of the vertebral column. The best method to accomplish this is, to raise the superior part upon which the body or trunk lies, of the double-inclined plane bed, to rather beyond that angle which would be equi-distant between the perpendicular and horizontal line. By this plan the diseased surfaces will be approximated, and at the same time will be kept in a perfect state of quietude; thus the process will be going on without disturbance; by which the disease is cured." 202.

Nearly fifty pages are devoted to the consideration of distortions of the spine, lateral and otherwise. The reader would almost be tempted to suppose that such a subject was exhausted. It is true Mr. Stafford does not deal in novelties, nor could he; but what he advances is judicious. The last portion of the volume is occupied with the Diseases of the Medulla and its Membranes. It is generally lamented, and with too good reason, that few are sufficiently conversant with either the natural or unnatural appearances of these parts. We trust that, in spite of the obstacles which interfere with their inspection, the reproach will not be a perpetual one.

Mr. Stafford draws a parallel between arachnitis and tetanus, at least idiopathic tetanus; he seems almost inclined to consider them identical. With this sentiment we cannot agree, for two reasons;—first, we know too little of the symptoms of one disease, and morbid characters of the other, to be justified in pronouncing decidedly on their affinity—secondly, arachnitis does certainly occur, unattended by any tetanic symptoms whatever—and, thirdly, tetanus proves fatal, and yet leaves no traces of arachnitis after death. Of the latter assertion we need bring no proof. In support of the former, we need only mention one case which we recently witnessed at St. George's Hospital. A man had compound fracture of the skull, for which he was trephined. Hernia cerebri followed—it increased—a state of partial stupor, with some increase of pulse and heat of skin ensued, and he died. On dissection, there was found, with other things, inflammation of the arachnoid and pia mater of the brain, and continuous inflammation of those membranes investing the medulla. Over the latter there was decided effusion of coagulated lymph, &c. This patient had evinced no tetanic symptom whatever. It is right to mention that four cases are related by Mr. S. in three of which the spinal arachnitis was unequivocal, and in the fourth doubtful. In the first of the three, there were distinct symptoms of traumatic tetanus; in the other two, there were also tetanic symptoms occurring idiopathically. In the fourth, there was tetanus after burn. We give Mr. Stafford's hypothesis all the benefit it can obtain from the foregoing cases; but we venture to observe that they are too few and inconclusive to confirm his opinions.

HYDRO-RACHITIS, OR DROPSY OF THE MEDULLA SPINALIS.

This arises from secretion of fluid from the spinal arachnoid, which gradually collects till it fills the whole canal. Its progress is usually very slow—its causes obscure—its symptom, paralysis, gradually developed—its treatment rather regulated by general principles than by experience. Mr. Stafford witnessed the following case in St. Bartholomew's Hospital.

Case. Thomas Cox, light porter, æt. 23, admitted Sept. 30, 1830.

"This patient, who is of moderate strength and stature, has usually enjoyed good health, with the exception of occasional headaches, which have troubled him from childhood. He has been accustomed to indulge pretty freely in liquors; but since his marriage, which took place a twelvemonth back, he has not, on an average, got drunk more than once a week. For three or four weeks previous to admission, he experienced uneasy sensations in the lower part of the belly, and a numbness of the thighs, accompanied with swelling of the right testicle. On Saturday evening, Sept. 25, he walked to the hospital to have his water drawn off, having never found any difficulty in passing it before. He afterwards walked home, a distance of half a mile, without difficulty, though he did not feel altogether firm upon his legs. He slept that night as well as usual, and found to his surprise, on Sunday morning, that there was complete loss of motion, and partial loss of sensibility of the lower limbs, with inability to make water. The fæces came away involuntarily in the course of the day; and the paralyzed limbs were occasionally affected with spasms, of which he was conscious. He was not feverish, and had neither head-ache nor other pains. On Monday he was cupped on the back by order of a Dispensary-Surgeon, who supplied him with medicines, and drew off his water till Thursday, when he was received into the Hospital, having derived no relief from the treatment." 274.

Cupping, leeching, blistering, warm-bath, the catheter, &c. were the means employed, but on the 5th the patient was worse; there was great weakness, furred tongue, dry skin, and feeble pulse. An alkaline calumba draught was prescribed, and a moxa applied on each side of the spine. The integuments covering the sacrum sloughed from pressure, the urine became loaded with ropy mucus, and offensive, and in spite of wine and broth the debility increased. A communication was now established between the bladder and rectum, its formation being preceded by the discharge of a small portion of sloughing membrane from the anus. Great emaciation ensued, with hectic cough, and on the 20th of January the patient died.

On examination, the arachnoid membrane, covering the upper surface of the brain, was raised by thin serous effusion, and the same kind of fluid was discovered under this membrane in the vertebral canal. The kidneys and ureter were healthy, the mucous membrane of the bladder dark-coloured, with the perforation of the viscus already alluded to. The legs were much swollen from anasarca.

Our author relates a case of effusion of blood into the spinal canal, independent of injury inflicted. He also cites a case which has been previously published by Sir Astley Cooper, and another by Mr. Chevalier. We shall take only the first, because it is original.

Case. J. Connell, æt. 31, was admitted into the St. Mary-le-bone Infirmary, May 23, 1828, with the secondary symptoms of syphilis. Mercurial ointment was prescribed, but, on the third night, having great dyspnœa, the ointment was discontinued, a blister applied on the sternum, and an aperient given. By these measures he was relieved, but he was seized in the night of the 26th with an attack of complete paraplegia; with severe pain in the dorsal region: pulse 80, sharp and full; bowels costive; retention of urine. He was cupped to 16 ounces, placed in the warm-bath, and the catheter directed to be used night and morning.

June 1st. Since last report has usually had hot skin, pulse above 100, sleeplessness, obstinately costive bowels; paraplegia still complete. He gradually grew weaker, a slough formed on the nates, the fæces were discharged involuntarily, and the catheter required to be passed twice daily, and on the 11th he died.

On examination, all the viscera were healthy, excepting the mucous membrane of the bladder, which was inflamed. A large quantity of blood was extravasated between the arachnoid and pia mater of the cord; it was semifluid, and filled nearly the lower part of the canal. The medulla was rather softer than natural in the dorsal region.

In Sir Astley Cooper's case the effusion was between the theca and bony canal; this case appeared to date its commencement to injury. The other case was that of a young lady, who had suffered no injury. She first complained of pain in the head and back upon the 26th of February, and died on the 4th of March. The extravasation was in the lumbar region.

"A child of 12 months old, who had just recovered from the operation for hare-lip, was carried out by the nurse. On its return home, it seemed in much pain, and appeared to have lost the use of its lower extremities: it died in three days. On opening the body I found the spinal canal full of a bloody serum, which, I have no doubt, was occasioned by slight extravasation from a strain, and subsequent inflammatory effusion. And how destructive such extravasation and inflammation combined, may be to the structure and office of the nerves, was illustrated by the case of a miller, who suddenly lost the use of his lower extremities, by lifting a heavy sack of flour. He died on the 15th day after the accident. On examining the vertebral canal, some extravasated blood was found mixed with a sanious matter, the theca vertebralis was evidently inflamed, and the nerves of the cauda equina were more completely rotten than I have found them after many weeks' maceration in putrid water, when removed from the dead body." 288.

We shall conclude this article by an instance of ramollissement of the medulla, which was witnessed by Mr. Stafford at St. Bartholomew's Hospital. It illustrates the general character of the symptoms.

Case. "Rebecca Dixon, æt. 16, admitted into St. Bartholomew's Hospital, November 1st, 1827: said that she had been struck with the handle of a mangle on the back part of the neck, in February last; but the injury was so slight that she took no notice of it until the beginning of September, a space of six months, when she applied to some public institution, on account of a severe pain in the upper and back part of her neck, and her face being drawn towards the right side; she took a number of remedies without benefit.

When she was admitted, she complained of severe and continued pain in the upper and back part of her neck; her face was directed over the right shoulder; she had not the least power of moving her head from side to side, and the least attempt made by another person to move it in that direction, produced excruciating pain. There was no defect either in motion or sensation of the extremities at this time. No disease of the vertebral column could be detected by an attentive examination. Her pulse was quick and feeble; her bowels were torpid, and required large and frequently repeated doses of aperient medicines to keep them free. Neither her respiration, nor her voice, were much affected at this time. She had never menstruated; her countenance was bloated and pale, without being particularly anxious. Her bowels were cleansed with calomel and jalap; and under the supposition that these symptoms arose from uterine irritation, the preparations of iron were given, with the occasional abstraction of blood from the back of the neck by cupping. This plan was persevered in during three weeks without benefit. About this time she had an attack of pain and tenderness in the abdomen, more particularly towards the right side, attended with vomiting, which continued till her death. The pain and tenderness were relieved in three or four days, by the use of leeches, and the exhibition of calomel and opium, the state of the pulse not justifying the use of the lancet.

Nov. 29th.—About this time she first perceived an inability to hold any thing small in her hands, and a sensation of numbness over the whole body, and an inability to stand or walk. These symptoms gradually increased, till they amounted to a total loss of sensation and voluntary motion: during the last two days of her life she passed her urine and fæces involuntarily: her muscles were rigid, and her limbs could be put in any position without pain. She died on the 11th of December." 296.

On examination, the spinal cord was found in a state of ramollissement about an inch below its commencement; it was pulpy, and stuck to the finger when touched, was of reddish-brown colour, and exhibited no traces of its original structure; this change occupied about an inch of the cord, the remainder being healthy. There were tubercles at the apex of each lung, adhesions on the convex surface of the liver, ulceration of the mucous membrane of the lesser curve of the stomach and of the intestines.

We have selected from this work such portions as appeared to offer any novelty, instruction, confirmation or otherwise, of unsettled points. It might be much condensed, and more attention might be paid to its literary composition. We meet with instances of defective grammatical construction, and such vulgarisms as, "it stands to reason." Faults of this kind are serious only because remediable with care and circumspection on the part of the author. Mr. Stafford is active, industrious, intelligent, and we wish him all success.

II.

LITHOTRITY AND LITHOTOMY COMPARED; BEING AN ANALYTICAL EXAMINATION OF THE PRESENT METHODS OF TREATING STONE IN THE BLADDER, WITH SUGGESTIONS FOR RENDERING LITHOTRITY APPLICABLE TO THE DISEASE IN ALMOST ALL ITS STAGES AND VARIETIES, AND REMARKS ON THE GENERAL TREATMENT OF GRAVEL AND STONE. By *Thomas King*, M.D., M.R.C.S. Surgeon to his Excellency the French Ambassador, Lecturer on Surgery, &c. &c. &c. 8vo. pp. 320—three Lithog. Plates. London, 1832.

It is a difficult matter, and history proves it, to decide on the merits of any innovation, or any proposition running wide of established practice or doctrine. The cause of this difficulty is not obscure. Reason will enable a few men to ascertain the essential value of thoughts or of things, with little aid from experience. But there are highly gifted beings, far surpassing the mass of mankind in intellectual powers. We usually form our comparisons from experience; we know that one object is more pleasing or more profitable than another, because we have seen, or have found, or have learnt from the observations of others that it has been so. Our data are founded in the evidence of experience, and judgment for the most part consists in the soundness of the reasonings based on, and conclusions drawn from them. Thus it is that men rarely decide amiss on subjects admitting of experience, and thus it is that errors so signal have been committed where this great instrument of human knowledge was not, or could not be applied. The delusions of astronomy, the history of the Harveian doctrine of the circulation of the blood, are obvious and notorious instances of this fact.

In former times innovations were regarded with more than indifference; they were looked on with positive repugnance, with absolute horror. We need not go farther than the Galilean persecution for an illustrious example.

The cause of this is to be sought and found in the narrow circle to which education was confined, and the cramped and scholastic character of education itself. These circumstances combined to produce a certain train of thinking, in a certain set of men, the most unfavourable to the investigation of new views, or the unprejudiced examination of those which custom and antiquity had established. These causes can hardly be imagined to operate at the present day. Education is no longer scholastic, no longer limited to special classes; all men would learn all things, and if they have not hitherto succeeded, it is not from want of inclination on their own parts, or of confident promises from those who teach. So far as the influence of education extends, it may now be considered as rather tending towards hasty assent to what is plausible and seems new, than to obstinate rejection of what is alike new and true. Undoubtedly there is and always will be in the world, a conservative party, high-tory doctrinaires, inclined to risk every thing in defence of old opinions. With them, every notion to which they have been habituated is a fortress to be defended against all attacks, and the worse the wall and wider the breach the more gallant do they deem the defence to be, the more imperative on them the refusal to abandon it. This party, however, is weak and is daily growing weaker; the majority, as we have remarked, are rather disposed to embrace than to repudiate novelties, as such.

The candid and cautious reasoner finds how difficult it is to pronounce upon the merits of new proposals in the arts or sciences. Of the merits and defects of the old plan he is aware from the almost unerring lessons of experience; but what is to inform him of those of the new? Can he, should he trust the specious promises of the inventor, or rather should he not endeavour to exercise his reason, and be guided in the main by its decisions? We think that he should; but we also think that, as the surest basis for such reasoning and support of it is experience, which in such a case is necessarily wanting, no man of candour or of philosophic mind will venture to offer an uncompromising or dogmatic opinion, unless the proposition submitted to his examination is unequivocally confirmed or opposed by common and recognized principles or facts.

These remarks seem to us to be applicable to the question of lithotrity and lithotomy, and the actual state of those respective operations. When lithotrity was proposed we affirm that no surgeon could pronounce upon its merits. He had no experience of such an operation; he could have no data of sufficient accuracy to enable him to tell where it failed or where it answered. Reasoning from what he knew might enable him to form analogical opinions on the probable effects of what he did not know, but it could not do more. He was conscious that lithotomy was an old operation, built up by a series of failures and successes, adopted after many trials and abandonments of other operations either more ancient, or proposed in modern times as substitutes for it. He was also conscious that many futile efforts had been made to remove the stone by other means than the knife, by caustics, solvents, drilling, bruising, and that all ultimately failed. Yet, on the other hand, he perceived that most of these attempts, and especially the mechanical ones, had been engaged in at a comparatively early period, when mechanical resources were greatly inferior to what we now possess, and that, independent of the clumsiness of the instruments, their application was not then directed, as it might be now, by an accurate acquaintance with the chemistry of the urine and its concretions, or a just discrimination of what should or should not be attempted on the living body. These considerations, and such as these, must have influenced all judicious surgeons in withholding a positive opinion on the value of lithotrity when first proposed.

Ten years have elapsed since that epoch, and what is the state of lithotrity now? It has certainly gained ground, and every thinking man is convinced of its applicability and value. But we question if their real amount is ascertained, or if it will be ascertained till the operation is in more general use than at present. Many circumstances combine to render it difficult to determine the utility of any art, or branch of art, whilst practised by only a few individuals. Such was the case with the treatment of diseases of the eye, in the hands of the oculists. We therefore hail with pleasure the attempts of surgeons to make themselves acquainted with the practical application of lithotrity, and we are convinced that such attempts, if properly appreciated and encouraged, are certain, whatever be the immediate result, to end in ultimate benefit to the public.

Dr. King, the author of the volume before us, is calculated by his accurate anatomical knowledge, as well as by the opportunities which he enjoyed, and situation which he held at the Hôtel Dieu, to embark in such an undertaking. We shall put our readers in possession of the chief facts elicited by his researches, experiments, and experience.

The first twenty-seven pages of the volume are occupied by a sketch of the urinary apparatus, and it seems to us to be correctly, and cautiously drawn up. Perhaps it displays a little too much of the French mode of thinking respecting Nature's contrivances and mechanism, and scarcely evinces enough of that old fashioned English prejudice in favour of the admirable handicraft of the CREATOR, which we are neither afraid nor ashamed of avowing. There is only one passage on which we think any comment required. Dr. King observes that,—

> "In almost every case it (the urine) becomes acid soon after its expulsion, thus differing from all other animal fluids, which seem to be alkaline; whilst those of vegetables are acid." 4.

This is doubly incorrect. The urine in health is acid in the bladder, nay it is secreted acid. To prove this assertion, we have only to draw off the urine with a catheter, and, retaining the instrument in the bladder, to test the urine as it comes from the kidney. The urinary is not the only acid secretion. The perspiration is acid—free acid is frequently, if not generally, secreted by the stomach—the saliva is often decidedly acid, and probably it is always slightly so.

The next chapter or section contains a description of the bladder in the adult male subject. This anatomical description is precise and perspicuous. The following quotation is deserving of consideration.

> "We now come to the relative position of the bladder. It is, however, of extreme importance that the Surgeon should first know that it is a fixed organ, not a floating one. There is one part of it as immoveably fixed as any soft parts in the body; yet, this fact seems to have escaped anatomists, or to have appeared to them either too evident or of too little consequence to demand particular notice. The bladder is fastened, at its neck, to the pelvis, nearly as

strongly as tendons are to the bones into which they are inserted; and, in this respect, it differs materially from every other organ in the abdomen. Its anterior and inferior part is fixed by those strong fibrous fasciculi described by authors as the anterior ligaments of the bladder; by the triangular ligament of the urethra, which is continuous along the membranous portion of the urethra with the capsule of the prostate gland; and, indeed, by the whole of the strong fascia of the pelvis. I do not mean to affirm that these parts are as strong as tendons, or ligaments: but they certainly yield as little without laceration or injury; and as this is one of the most important facts connected with the treatment of stone, I particularly solicit attention to it.

The anterior region of the bladder corresponds to the symphysis pubis; to the pubic ligament, from which it is separated by its own anterior ligament and cellular tissue; and, in a small extent, to the triangular ligament of the urethra. Above the symphysis, this region corresponds, opposite the linea alba, to the fascia transversalis of Sir A. Cooper; but whenever the bladder rises fairly an inch and a half above the pubis, it is in contact with the peritonæum lining the wall of the abdomen, in addition to its own peritonæal covering. In other words, the shining surface of the peritonæal covering of the bladder is in contact with the same surface of the peritonæum lining the muscles of the abdomen; so that an instrument, to penetrate this part of the organ, must traverse the peritonæum twice.

I am induced to lay claim to the discovery of this fact; for all the authors I have read state, that when the bladder is distended so as to rise above the pubis, it passes to a considerable extent between the peritonæum and the abdominal muscles, or rather between it and the fascia transversalis. I was led to this discovery, from having seen the peritonæum wounded in the high operation for stone, by the best operators; which I could not explain, till I observed, on investigating the subject, that when the bladder is distended by insufflation, it rises in the proper cavity of the peritonæum. I do not pretend that a small part of the bladder, thus distended, may not be uncovered by the peritonæum above the pubis; but I positively assert that this organ (and in old persons more especially) expands in the abdomen, in some such manner as the uterus does in gestation, by a gradual yielding of its peritonæal as well as of its other coats; and not by detaching the peritonæum, as it has been hitherto supposed, from the abdominal parietes. It is remarkable that an acquaintance with the nature of serous membranes did not lead, *à priori*, to a knowledge of this fact. Why should not the serous membrane of the bladder yield as much as its mucous and muscular coats; when it is well known, that the susceptibility to yield to distension, is one of the characteristic properties of serous membranes? Indeed, they yield more promptly than other membranes, as we see in hydarthrus, hernia, ascites, and in a multitude of other circumstances." 33.

We believe that Dr. King is perfectly correct in this description. We have seen the peritonæum reflected on itself by the distended bladder in the dead body. We remember a case in which this occurred to a very remarkable degree. A female was under the care of a physician for an abdominal tumour, supposed to be an enlarged ovarium, or a gravid uterus, or something else not very obvious. Many consultations were held on the subject, but the only point on which all appeared unanimous, was in steering clear of an operation. The woman died, and was examined. On reflecting the abdominal integuments, a tumour was seen, of considerable size, lying loosely, as it seemed, in the cavity of the abdomen. The physician chuckled —"I told you the lady was enceinte," said he: but the Doctor was premature—it was a bladder so enormously distended, that it held, at the least, half a gallon of urine. On emptying the viscus, a malignant polypus was found in the uterus, growing from its fundus. We mention this case, because the loaded bladder lay loosely in the peritonæum, like another abdominal organ, and the instrument which punctured it would have penetrated two folds of the serous membrane. At the same time we must not forget that, when the urinary bladder is distended, there certainly is a cellular interspace of some dimensions between the peritonæum, reflected from the abdominal parietes to the organ, and the upper margin of the symphysis pubis.

Dr. King very properly points out the laxity of expression respecting the "neck of the bladder," and "prostatic part of the urethra." In point of fact, these are one and the same, for the prostate forms the whole floor, and a portion of the sides of the neck, and if this be deemed a part of the urethra, then the bladder can have no neck whatever. The urethra should be considered as commencing at the anterior extremity of the prostate.

The following dimensions of the apertures of the pelvis, in reference to lithotomy, are deserving of attention. We seldom see so much accuracy displayed in anatomical description as is done by Dr. King.

> "The margin of the inferior aperture of the pelvis is formed superiorly and anteriorly by the symphysis pubis; laterally, by the branches of the ossa pubis and of the ischia; behind, by the summit of the coccyx; and on the sides, posteriorly, by the sacro-sciatic ligaments and ischiatic tuberosities. The plane of the aperture is inclined forwards, as its axis indicates.
>
> The best mode of measuring the opening, and of appreciating its form and direction is to remove the bladder, rectum, and all the soft parts of the perinæum and pelvis, except the obturators and pyriformes muscles, and their fasciæ. It will then be seen, that the distance from the bottom of the symphysis pubis to the tip of the coccyx, is about four inches and an eighth. The greatest transverse diameter is that taken from the back part of one tuber ischii, where the larger sacro-sciatic ligament is attached, to the same point of the opposite side; it passes immediately behind the anus and measures three inches.*
>
> The extent of a line drawn across, along the inferior edge of the pubic ligament, from one side of the pubic arch to the other, is one inch and an eighth; lower down, opposite the posterior margin of the prostate, (and by opposite, I mean in a line intersecting another drawn parallel to the axis of the outlet, from this margin forwards,) the distance across, which has been tremendously overrated, is only one inch and three quarters. Finally, the extent of a line drawn from one ramus ischii to the other immediately in front of the anus, is two inches and a half. This last line circumscribes what is generally called the perinæum; all that is posterior to it belonging to the region of the anus.
>
> The length of one side of the pubic arch, taken from the back part of the tuber ischii to the bottom of the symphysis pubis, is about three inches and a half.
>
> We have given the average admeasurement, but these dimensions vary much more in the male than in the female pelvis; and almost always, what is lost in one diameter is gained in another; if the distance is augmented from the symphysis pubis to the coccyx, the transverse diameter will be found proportionably diminished; and when the latter is excessive, the antero-posterior diameter is lessened."—77.

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* "The direction in which a stone should be extracted by the pelvic outlet is indicated by a line drawn from the incision in the prostate, towards the part of the pelvis where this diameter is taken; but, as the prostate is turned forwards and near the bones, the extraneous body and blades of the forceps must first be made to revolve on an axis formed at the posterior extremity of the incision in this gland."

Here we must take leave of the anatomy of the pelvis, though we cannot do so without bestowing a well-earned compliment on Dr. King, for the care with which he appears to have studied, and the precision with which he certainly has described it. Dr. K. next proceeds to the consideration of lithotomy in the perinæum. We shall select such passages as seem to convey new views, or contain important criticisms on old methods. Our readers are aware that many surgeons employ the bistoire cachée of Frere Cosme; indeed, the most dexterous lithotomist whom we know most commonly uses it. There may be objections, in point of principle, to the instrument, but we cannot avoid thinking it a very convenient one. However, what we wish to advert to at present, is Dr. King's alteration of this *lithotome caché*.

"I shall first explain what alterations I have made in the *lithotome caché*, and then briefly describe the operation as I prefer performing it. The original instrument consists of a sheathed knife four inches long, curved so as to be convex on its cutting edge; and of a handle with a spring for unsheathing and sheathing the knife, which passes from and into the sheath edgewise. The sheathed knife which I use, opens in like manner; but it is straight, wider than the original one, cutting in its whole extent, and only two inches long in the blade. Where the blade joins the handle, there is a sort of stop or hilt to prevent this part of the instrument going beyond the prostate; the handle is thin and six inches in length." 98.

Passing over the steps of the operation, as performed by Dr. King, in which there is more that is judicious than new, and merely noticing his antipathy to the operation by the gorget, which he denominates "stabbing in the dark," we pause at a subject of the utmost consequence—the incision of the prostate. On this point there is much discrepancy of opinion, and probably, therefore, much error. Mr. Brodie, in his lectures on calculous diseases, which were published in this Journal, particularly cautions the surgeon against carrying his incision through the prostate, so as to injure its capsule. If the latter be torn, there is nothing to protect the loose texture of the bladder from laceration, the cellular tissue in the neighbourhood is extensively injured, and the risk of infiltration of urine immeasurably augmented. Such is the doctrine of Mr. Brodie, deduced from no inconsiderable experience. It will now be shewn that Dr. King maintains opinions in all respects similar, nay, identical.

"Of the patients who submit to the lateral operation, one in seven or eight dies; and, in almost all those cases which have a fatal issue, death is produced either by the force used to extract the calculus, or by too extensive an incision in the prostate. If the incision is small in comparison with the stone, death will follow from the violence done to the bladder and surrounding parts, in the extraction; and if the incision is made sufficiently extensive to admit of the fair extraction of a stone one inch and a half in each of its two lesser diameters, death will follow from infiltration of urine.

In criticising the lateral operation, the first thing to be attended to is, then, the volume of the stone; success or failure depends upon it. If the foreign body never exceeded three inches in its lesser circumference, so that the incision in the prostate might be limited to three quarters of an inch or a few lines more, the operation, when well performed, would seldom or never be followed by fatal consequences. When it measures four inches and a half in its lesser circumference, or that the sum of its two lesser diameters amounts to three inches, the patient may recover, but the chances are very much against him; and when it exceeds this volume, death is almost sure to be the result of the operation.

> The Surgeon is in this dilemma,—he must either use force, or make a long incision; the former lacerates the prostate and cellular tissue, bruizes the bladder and stretches its membranes, and shocks the nervous system: the latter prepares the way for infiltration of urine: both are fatal nearly to the same degree." 105.

This is a subject deserving, nay, demanding, the most anxious and careful consideration of lithotomists. The largest transverse diameter of the pelvic outlet is three inches; opposite the prostate it is only one inch and three quarters, of which one inch and a half is all that can be obtained by moderate pressure.

> "But, the great obstacle to the extraction of a stone measuring an inch and a half in its lesser diameters is the situation of the prostate. The calculus must pass between the inner surface of the rami of the ossa pubis, and the posterior boundary of the incision in this gland; and, as the distance between these, when the incision in the prostate is not dangerously extensive, is only an inch and a quarter, it necessarily presses the anterior wall of the bladder against the bones, on the one hand, and tends to tear the back part of the prostate, on the other. As the prostate is firmly fixed, it cannot be drawn backwards, or pushed farther from the bones towards the cavity of the pelvis, without the ligaments yield or break; yield they may, perhaps, a quarter of an inch without laceration, and then a stone of the above size may be extracted, possibly without mortal injury.
>
> But when the foreign body is larger, something must give way: the bones cannot yield, and if the calculus be not crushed, the prostate and bladder must be torn; and the effects of this laceration is almost certain death." 107.

We do believe that this is true, true at least in the main. Who that sees many great operations, but can generally predict too truly, which of them will be followed by disastrous consequences. The surgeon may find an excuse in unavoidable embarrassments, well-disposed spectators may allow of such, but their judgment whispers that the issue will be fatal, and very rarely indeed is that judgment false. For instances of the disastrous consequences of the violence in lithotomy, we may refer our readers to our review of Mr. Fletcher's Medico-Chirurgical Notes and Illustrations. The following expressions of Dr. King are strong, yet not more so than the circumstances warrant.

> "The use of force to extract a stone is so surely followed by death, that I shudder to think how often Surgeons have recourse to it. It has so generally occurred to me, to foretel the issue of a case simply by the degree of force employed, that, if I witness it now, I do not hesitate in indicating to those near me when the operator has arrived at the point beyond which recovery is impossible. I shall shew presently, that a large opening in the prostate, made scientifically with the knife, is too dangerous a lesion to be allowed much longer to belong to surgery; but dangerous as it is, one would almost call it a safe and simple wound, when compared to the injury inflicted by a surgeon, who, placing his foot against the table, employs all the strength he possesses, to stretch and tear the bladder, lacerate its connecting tissues, bruise the surrounding parts, and shake, mortally shake, the whole nervous system! This anti-physiological process, this absurd and horrid practice, is so cruel, so fatal and yet so common, that there is nothing in which, as a surgeon, a man might more justly pride himself, than having contributed to abolish it." 111.

Laceration may prove fatal—first, from the immediate shock to the system. A blow on the epigastrium will produce death; contusion of any of the viscera may do the same, and if not immediately, almost invariably at a subsequent period. Why then should we feel surprised that tugging at the bladder and lacerating its coats, with its many tissues, its organic and animal sympathies, its large hypogastric plexus, should likewise prove a cause of speedy destruction? Secondly, contusion and laceration of the bladder and contiguous cellular membrane may occasion diffuse cellular inflammation, with its sequelæ, abscesses or sloughing, or depôts in other parts. Thirdly, the same conditions may ensue from infiltration of urine. Such are the effects, not hypothetical, but real, melancholy, practical effects of laceration. Those of too free an incision, are—infiltration of urine, and, we believe, diffuse inflammation of the cellular tissue independent of urinary effusion. Besides these, we are inclined to conceive, from cases which we have witnessed, that a circumscribed abscess in the deep cellular membrane of the pelvis is another consequence of too free an incision, though it may probably arise without it. The observations of our author on this head are so sensible, so consistent with the conclusions of practical surgeons that we feel regret at being unable, from want of space, to give insertion to them. We refer our readers to the work itself, and this we do more readily, as we have pointed out in a few words the real dangers, the roads and shoals in the way of the lithotomist.

"It would be difficult to say geometrically how long the incision may be made without danger; and I certainly have not the presumption to draw precisely the line, on one side of which is safety, and on the other death; but, I am convinced from meditation on the anatomical facts connected with this subject, and from the painful experience of seeing many die, that the danger of a wound in the prostate is in the direct ratio of its extent, and that an incision necessary for the extraction of a stone measuring an inch and a half in its two lesser diameters, puts life in imminent peril.

Of the two evils—the use of force, or a long incision—there can be no doubt which is the minor; since the latter subjects the patient to only one serious danger, whilst by the former he is exposed to many fatal consequences." 119.

The fact is that no incision into the bladder, be it ever so inconsiderable, is free from the risk of cellular inflammation. Wherever there is loose cellular tissue, the most trifling wound of it will, under circumstances which we cannot well determine, and in some individuals, give rise to that inflammatory effusion which runs like wild-fire through the tissue, killing it, or occasioning secondary inflammations and deposites elsewhere. Yet this danger is incalculably increased by contusion, or too extensive incision. Several highly interesting cases are detailed by Dr. King: we shall notice two or three.

Case 1. (3.) "*Protot François*, aged 22 years, of a good constitution and sanguiferous temperament, had been subject to derangement in the urinary apparatus for fifteen years, and had frequently passed small calculi by the urethra. On the 15th of April, 1822, he entered the Hotel-Dieu, complaining of the usual symptoms of stone in the bladder; he suffered intensely in voiding his urine, which contained no blood, but a great deal of mucus. A spare diet and baths were ordered. On the 12th the patient was sounded and the stone recognised. On the 15th, the operation was performed according to the plan of Frére Cosme or (*méthode lateralisée.*) Incisions were first made through the soft parts of the perinæum up to the membranous portion of the urethra; this canal was then opened to admit the sheathed knife, which was passed into the bladder, opened, and then withdrawn unsheathed, so as to divide the prostate to the extent of a little more than an inch. The stone which appeared to be very large, was extracted with great difficulty; after several attempts to remove it, which lasted eight or ten minutes, its external layers at length gave way and were crushed; it was then withdrawn without further violence. As several of the fragments escaped from the forceps, a few minutes were occupied in clearing and washing out the bladder.

The patient was carefully put to bed, and an antispasmodic *tisane* was ordered. He passed the day tolerably well, although he seemed much depressed; towards evening some uneasiness was felt at the lower part of the abdomen; it seemed however, to be occasioned by the passage of gaz in the intestines. On the 17th, there came on vomiting with increasing uneasiness in the abdomen. Forty leeches were applied to the abdomen, and diluent drinks given plentifully.

There was some abatement in the symptoms in the night, but no distinct remission. On the 18th, twenty more leeches were applied to the abdomen, and twenty to the perinæum. The patient was also placed in a bath. On the 19th the vomiting had disappeared, but the features were much changed; the pulse was wiry, the skin hot and dry, the tongue somewhat parched. More leeches, purgatives, baths and fomentations were had recourse to, but without effect: the patient died on the 21st.

Necropsy. The parts in the vicinity of the wound, were macerated in a brown purulent fluid. The whole of the cellular tissue of the pelvis was infiltrated with thick pus; this infiltration extended into the lumbar regions and filled the iliac fossæ.

The peritonæum presented, to the extent corresponding to the suppuration beneath it, abundant pseudo-membranous productions uniting the small intestines to one another and to the bladder. The other parts of the body were healthy; the tissue of the kidneys seemed, however, to contain a little more black blood than usual." 127.

Here it is obvious that the mischief was primarily and essentially in the cellular tissue, and that the peritonæum was secondarily affected. The period at which the symptoms supervened, and their character, are deserving of attention.

"Some time ago, Baron Dupuytren, deeply impressed with the difficulty and danger of extracting a large stone, and imagining that they might be partially obviated by an incision occupying the whole breadth of the perinæum, revived and improved the operation of Celsus. In this method the prostate is divided by a semilunar incision, or almost horizontally, on a level with its junction with the urethra; therefore, the incision extends very near, if it does not interest the margin of the gland, where its capsule splits and becomes continuous with the different layers of the fascia of the pelvis. One of the evils belonging to this plan is, of course, the facility with which the urine makes its way between these layers; and as the consequences are precisely those which are observed when, in the lateral operation, the incision is made too horizontally, I shall insert one or two cases to illustrate this point, and farther to exemplify what has been stated generally respecting the effects of lithotomy when the stone is large. First, however, it may be right to remark here, that a still greater objection to the horizontal method is the impossibility of withdrawing the stone in the direction we have so much insisted upon, as the only one offering any chance of safety." 129.

Two cases in which the Baron performed this operation are related by Dr. King. We shall take the second, not only because it is the shortest, but because it comprises several circumstances worthy of attention.

Case 2 (5.) Ternisien Victor, æt. 22, admitted into the Hôtel Dieu, March 12th, 1825.

"He declared, that from his infancy he had experienced pain and difficulty in voiding his urine, although, during certain intervals, the symptoms had been intermittent. He had been sounded in 1815, when a stone was recognized in the bladder; but as the symptoms were not very urgent, no curative means were then employed.

On the 12th of March, the patient's sufferings were truly distressing; the most acute pains returned at very short intervals; the fæces were involuntarily excreted by the violent contraction of the abdominal and perinæal muscles, which took place to expel the urine whenever the fluid was accumulated in the quantity of two or three ounces; and all the usual symptoms of stone existed, to an intense degree. Being of rather a plethoric habit, he was prepared by purgatives and a spare and regular diet, till the 29th, when the operation was performed by the horizontal method.

The stone which, as was afterwards seen, was equal in size to a large walnut and of a globular form, could not be extracted without considerable force exercised amidst the patient's shrieks, and the violent convulsive contraction of his abdominal muscles.

As little blood had been lost during the operation, the patient was bled shortly after it: a large, soft, hot poultice was applied to the abdomen and an antispasmodic mixture administered. Notwithstanding these means, he passed a restless night, and in the morning of the 30th another bleeding was performed. After this he seemed better, but on the 2nd of April, he complained of uneasiness in the gluteal region: his pulse was frequent, the skin hot. April 3rd, fifteen leeches were applied to the painful part. April 5th. Shivering and increase of fever, with great restlessness. (Seven leeches; Mixture containing an ounce of the *Syrup. Papaver.)*

The following days, the same symptoms prevailed, although the urine flowed freely from the wound and leeches were applied in abundance.

The 10th instant. It was ascertained that pus had formed in the cellular tissue of the left gluteal region; and a large opening was made which gave issue to a great quantity of it, of a fetid nature, and mixed with gas. The countenance was anxious and dejected, the pulse soft but rapid, the tongue white, the skin covered with copious perspiration. A little soup was now allowed. The 11th and 12th instant. The symptoms became alarming; the small pulse, dry tongue and general depression indicated a fatal issue. A little claret was administered, but on the 13th the patient expired.

Post-mortem Examination, Thirty-six hours after Death. The skin of the whole of the posterior region of the trunk had a livid aspect, and under it, communicating with an opening in the left gluteal region, the cellular tissue was every where infiltrated by a layer of thick, concrete, yellowish pus. The latissimus dorsi and glutæus maximus of the left side were equally drenched in pus, which extended under them as far as the pyriformis, but no farther. The kidneys were rather pale, but healthy; the right and its ureter were a little larger than those of the left side.

The bladder was contracted and empty; its mucous membrane had rather a brown aspect, and appeared somewhat thickened. Its prostatic portion presented a horizontal opening, the lips of which appeared evidently contused. The soft parts of the perinæum were divided by a semilunar incision half an inch before the anterior wall of the rectum. Some of the lymphatic glands in the pelvis were in a state of suppuration; there was also some pus in the cellular tissue between the muscles of the upper part of the right thigh.

The brain and its membranes were in the state usually observed after death by similar causes; there was a good deal of serum, infiltrated as it were, in the substance of the pia mater. The organs of circulation and digestion were healthy.

The anterior border of the right lung presented a circumscribed abscess one inch in diameter; this appeared to me to be a true vomica. In no part of the body could a tubercle be found." 141.

In cases related in the foregoing manner, abbreviation, at least useful abbreviation, is impossible. They are already abbreviated to the utmost degree, consistent with the preservation of features of importance. The preceding is an instance of the purulent deposites in the cellular membrane and in the lung, following the operation of lithotomy. One point appears to merit notice. M. Dupuytren performed the Celsian operation, or a modification of it, that is, he made a semilunar incision between the rectum and urethra, in order to gain space for the extraction of the stone. Now we are told that the latter was equal in size to a large walnut, and that considerable force was exerted in effecting its extraction. We do not hesitate to say, that a stone of this bulk could have been extracted without the employment of more violence by the lateral operation. It appears to us that it is not in the external incision, or in the wound between the integuments and the bladder, that space is required. It is the opening into the bladder itself that is insufficient for the safe removal of a large stone. It may be said that, by the Celsian operation, we divide both sides of the prostate, and so gain room. The fact is, that both sides of the prostate may be divided, independently of the Celsian operation, by a broad-shouldered, double-edged knife or gorget, with a beak inclined at an angle to the plane surface of the blade. By the Celsian operation we are liable to wound both ejaculatory ducts; nay, it is not impossible that the urethra might be severed from the bladder. These are objections; and the foregoing case is sufficient, of itself, to prove that the freedom with which a large stone can be removed by it is ideal.

The next subject adverted to by Dr. King is hæmorrhage, an important one. This is usually furnished by the perinæal artery, or the artery of the bulb, occasionally, as in the case of the late Mr. Shaw, by irregular branches which no knowledge can anticipate—no dexterity avoid. Dr. King observes, and we think well, that profuse and dangerous hæmorrhage may be furnished by small deep-seated vessels about the neck of the bladder. There is a plexus of veins in this situation, and we have good reason for thinking that, in advanced age, when the vital contractility of the bloodvessels is diminished, and the natural means of arresting hæmorrhage inefficient, bleeding to a dangerous amount may occur from this source. We also agree with Dr. King that the best, because the least injurious, means of stopping this bleeding, is pressure by the finger of an assistant. This is irksome enough, God knows; but the life of the patient is at stake.

"At the Hotel Dieu, plugging to arrest hemorrhage after perinæal lithotomy, is performed thus:—a kind of linen purse, five or six inches in length, which the French call *shemise*, a straight metallic tube or catheter not quite so long, of three eighths of an inch diameter, and a certain quantity of lint for stuffing *(bourdonnets de charpie)* are necessary for the purpose. The purse is fixed tight round the canula in a notch at about three quarters of an inch from that end of it which is to be passed into the bladder, and open at the opposite extremity. By this contrivance the canula is placed in the centre of the bag, and protrudes through it at one end. The Surgeon, after anointing the exterior of the linen with cerate, passes the canula with the purse drawn close upon it through the wound into the bladder, his left index serving as a conductor; he then introduces the bullets of lint into the bag, one by one, with a common dressing-forceps, pressing them down with sufficient force to stop the bleeding. Pressure is thus exercised between the lips of the wound, in their whole extent, and the canula which secures an issue to the urine, and which is fixed by means of two rings it presents to a T bandage adjusted to the patient." 145.

Hæmorrhage after lithotomy is a great evil on several accounts. Independent of the immediate risk from loss of blood, and subsequent exhaustion or reaction, we believe that the pressure and the plugging of the wound increase in a very material degree the hazard of the formation of matter or of diffuse inflammation in the cellular tissue of the pelvis. It is certain that in two instances which we have lately seen, of abscess in the cellular texture of the pelvis after this operation, hæmorrhage occurred, and required long and tedious pressure to restrain it, much exposure of the parts and much disturbance of them. A fatal case of hæmorrhage is related by Dr. King. The symptoms in that case are so perfectly analogous to those which we have witnessed in cases of internal suppuration, that we cannot but suspect the existence of such, although Dr. King declares that none was discovered on the examination after death.

LITHOTOMY BY THE RECTUM.

We know how this operation has been lauded in modern times. Bellinghieri, we think, in Italy, has been said to have met with we know not what success, but something almost surpassing belief. M. Sanson, at the Hôtel Dieu, has also been said to be very successful. It is fortunate that Dr. King has had an opportunity of seeing many of M. Sanson's and M. Breschet's cases, and can therefore tell us what he saw. We shall find that his remarks are not calculated to encourage English surgeons to adopt this operation.

"Recto-vesical fistula and infiltration of urine render it dangerous, and the former attends it in so consequent a manner, that it is as disastrous, if not so immediately dangerous, as the lateral method. Those who have watched cases in which this plan was adopted must allow that it leaves a fistula as an almost certain consequence of the operation. The incision will not close; it appears that its lower part constituted by the anterior wall of the rectum, is kept open by the passage of the fæces and irregular motions of the sphincter, and its upper by the flowing of the urine; there is no support for granulations: the cicatrix has nothing to build upon.

This result is so constant, that the recto-vesical section must be viewed rather as the substitution of one disease for another, than as the means of restoring health; and it then becomes a question whether the one substituted, is of such inconsiderable inconvenience as to warrant its introduction into practice? If this kind of fistula only amounted to an inconvenient and temporary deformity, the project might be entertained; but, unfortunately it is of a very serious nature, and depending as it does entirely upon the physical disposition of the parts concerned, is almost always beyond the reach of art. In general it is not immediately destructive, but it seldom persists long without impairing even the most robust and vigorous constitution. The continual contact of the urine produces inflammation in the mucous membrane, which, as it creeps along the intestine, occasions great disturbance; giving rise to diarrhœa, which cannot be subdued, since the cause cannot be removed, and which, although the patient may resist it for months, or even years, finally exhausts him, either by its own intensity, or by provoking disease in some organ whose integrity is necessary to life. I should think that one half of these cases of fistula terminate fatally. In a very small proportion of them, where the patients happen to be placed under the influence of the most propitious circumstances, a cure may be obtained; but by far the greater portion of those whose general health remains unimpaired by the local injury, must submit to a deformity, which renders life almost unendurable. I have seen, at least, five or six operations by this method, and in only one case was the cicatrisation of the wound obtained, although they were performed with consummate skill, and great care was taken to make only a mere notch in the rectum." 160.

Infiltration of urine is perhaps less likely to follow this than the lateral operation. The ejaculatory ducts may be wounded. In the only instance in which we have seen the recto-vesical operation performed, the patient died of abscess in the pelvis. Dr. King relates a case in which the operation was performed by M. Sanson. The patient died of suppuration and sloughing in the cellular membrane, extending into the peritoneal cavity.

HIGH OPERATION, OR LITHOTOMY ABOVE THE PUBES.

As Dr. King very justly observes, this operation is not only more liable than the lateral operation to be succeeded by infiltration of urine into the cellular tissue, but also by peritonitis, the two chief dangers of the latter. When we add that the operation is one of extreme difficulty, we pronounce its condemnation in the most emphatic terms. A very large stone has been supposed to be its only justification, yet we venture to say that if a calculus is too large to admit of extraction by any operation but that above the pubes, it were better not extracted at all. The patient must almost surely die.

LITHOTRITY.

The following enumeration of the gentlemen who have invented lithotrity, for really there appears to have been half-a-dozen, will prove what we have frequently asserted, that in medicine, as in the arts, discovery is always gradual. The man who first strikes out an idea is seldom if ever successful in its practical application.

"Lithotrity consists in the reduction of calculi to powder, or fragments sufficiently small to pass through the urethra, by means of instruments introduced down this canal into the bladder. To accomplish this or some very similar object, instruments have been invented and recommended by Messrs. Elderton, Amussat, Leroy d'Etiolles, and Heurteloup. These gentlemen were preceded by Mr. Gruithuisen in the invention of an instrument for drilling a hole in calculi, but with a view, it is believed, of dissolving them by some chemical agents; and it is well worthy of remark, that long before their praiseworthy attempts, two non-medical persons, a monk of Citeaux and Col. Martin, not only devised but actually cured themselves of stone by means somewhat similar to those now adopted in Lithotrity. The idea of breaking and pulverizing a stone in the bladder seems first to have originated with the monk, but it is not likely Col. Martin borrowed it from him, since he employed different means. I think there is no probability of plagiarism, either on his part or that of the practitioners we have just named. It would be a difficult task to assign to each of these the degree of merit due to him; suffice it to say, they have all well deserved of mankind. Mr. Gruithuisen, who published in 1813, appears to have been the first to devise any thing like scientific or methodical means for acting upon a stone in the bladder by trituration. In 1819, our countryman, Mr. Elderton,* conceived the idea of Lithotrity, and invented ingenious instruments for the operation; but here he stopped. Mons. Leroy had the same idea in 1822; he constructed and made known instruments which are now in use. About the same time, Mons. Civiale succeeded in the same object; and to him was reserved the good fortune and high privilege of first employing Lithotrity with method and success upon the living subject: he is still a very successful operator. Baron Heurteloup is now quite as successful and scientific a lithotritist, and to him the world is indebted for the invention of instruments more ingenious, and in many respects, more perfect than those known before his valuable labours. The merit of laying down the principles of Lithotrity more comprehensively and more perfectly than any other person, belongs also to him; and he shares likewise the honour of its introduction into Great Britain, to which, with my skilful friend Mr. Costello, I hope I have endeavoured to contribute." 183.

The instruments most in use at present are, the three-branched forceps of Messrs Leroy and Civiale, and the four-branched forceps, the assisting forceps, and the shell-breaker of Baron Heurteloup. We lately gave an extended review of the able Baron's work, and, as many descriptions of the process of lithotrity and of the instruments employed are before the public, we shall refrain from touching on these topics again. Our object is rather to point out the comparative advantages of lithotrity and lithotomy, and to put our readers in possession of the sentiments of Dr. King, which appear to us both impartial and judicious, on this important subject. It seems to be generally acknowledged that, in the present state of science, lithotrity is scarcely applicable when the foreign body exceeds an inch and a half in two of its diameters. Thus large stones must still be left for the lithotomist; that is, the worst and most fatal cases must continue to be confided to him. Information, however, is spreading both in the profession and out of it, and we entertain no doubt that patients will now learn to appreciate the early symptoms of this complaint, and apply in the first instance for surgical assistance. Surgeons, again, will not only be better acquainted with the initiative of calculous disorders, with the chemical alterations of the urine, and the most scientific means of obviating them; but they are in possession of mechanical methods of destroying or removing small stones when formed —methods which, in such circumstances, are comparatively devoid of risk, and fail to inspire the horror which the prospect of lithotomy must create in the minds of unfortunate patients. The invention of Sir Astley Cooper's urethra-forceps and of lithotrity must, in this point of view, form an era in the history of surgery, and, if mitigation of human sufferings and preservation of human life deserve well of mankind, in the history of the world.

Dr. King very properly insists on the care which should be taken to prepare the patient for lithotrity, as for all great surgical operations, care which we regret to say we have not seen on too many occasions. The following are Dr. King's opinions on the three-branched instrument of M. Civiale, and the four-branched instrument of Baron Heurteloup.

"A few remarks will now be necessary upon the preference to be given to any particular plan of Lithotrity, or to any particular instruments, in the treatment of the principal varieties of stone. We have no hesitation in stating, that there is only one case in which the four-branched instrument ought to be preferred, namely, that where the calculus is composed chiefly of oxalate of lime, and very hard. In all other cases, which form by far the greatest number, we prefer the three-branched instrument and drill, that is, the treatment by successive perforation, which, in the present state of science, appears much more safe than any other. The instrument with which it has been proposed to destroy the stone by excavation, is much more liable to break than the three-branched forceps; and that invented to act by concentric pulverization is open to the same objection, besides being inadequate to the purpose for which it was intended. Most assuredly we should recommend the four-branched instrument for the treatment of all large round stones, of whatever composition, if excavation, or still more, if concentric pulverization could be employed with efficacy and safety; but we contend they cannot: the excavator has not yet been, and we fear, can never be made of sufficient strength; and even barring this difficulty, it is almost impossible to reduce a stone, in the manner proposed, to so thin a shell that it may be broken by percussion, unless it can be seized with the percussor-forceps. When an excavator shall be made so strong that there be but very little risk of its breaking, and so well as to reduce a stone to a mere shell, it will deserve to be adopted with the four-branched forceps, in preference to the drill and the three-branched instrument, wherever the calculus is large and round. But, we are of opinion that the most rational and safe plan of all for destroying calculi, would be that of concentric pulverization, were the saw sufficiently perfect to carry it into effect. Some of the strongest objections to Lithotrity would then be obviated: there would be no rough fragments left to irritate the bladder; and as the instrument would leave the surface of the stone smooth, the operation, every step of which would bring relief to the patient, might be interrupted and deferred, at any time, with impunity. Had we such a saw it would be right to use it with the four-branched forceps, in all cases where the stone is not flat, but more particularly in those in which it is voluminous. It will appear from what precedes, that we consider the four-branched forceps better adapted, than any other, to overcome the difficulty of seizing the stone, without pinching the bladder." 216.

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* "To this gentleman, who resides at Northampton, we are also indebted for other inventions of great importance in surgical operations."

In general, several applications of the instrument are necessary, the number varying with the size and consistence of the stone, the state of the bladder, and condition of the patient. The time between the sittings must of course vary under similar, or nearly similar circumstances. The surgeon should always be prepared to perform lithotomy, and should never be without the necessary instruments. Of the propriety of this advice, we have ourselves seen a remarkable instance. For many judicious directions and reflections respecting the operation, and matters connected with it, we refer the surgeon to Dr. King's work. After relating two interesting cases of lithotrity, he proceeds to consider, seriatim, the objections which have been advanced against it.

1. "A great deal has been said about the difficulty of seizing the stone; many considering it so great as to prevent the general adoption of the operation. The ablest Surgeons, say they, have been foiled in their attempts to lay hold of the calculus, and those who style themselves Lithotritists, nearly as often. But the answer to this is, that the difficulty, however great, (and certainly it is the greatest attending the operation) is to be overcome by patience and that dexterity which practice gives. Besides, it has been, in a great measure, obviated by Baron Heurteloup. With his bed, the stone can almost always be made to roll to

the back part of the floor of the bladder, where a Surgeon who has practised on the dead subject, will seldom fail to grasp it.

2. The liability to contuse and pinch the bladder is certainly a serious objection; and it cannot be denied that these injuries are sometimes inflicted. But, although the coats of the bladder may, by chance, be caught in the forceps by an expert operator, he will discover the accident early enough to avoid doing them any fatal or serious violence. We are inclined to believe, that except on very rare occasions, he must be rather inexpert who could pinch or strike the bladder so severely as to produce contusion, laceration, or violent inflammation.

3. Another strong objection, founded upon the occurrence of the accident to some of the best Lithotritists, is, that the instruments are liable to break in the bladder. Now, admitting this may have happened once in twenty or thirty operations, when we consider that it is to be attributed to defects in the instruments, which are rendered every day more perfect and less fragile, is it too much to expect, that the time will come when such an occurrence shall be unheard of? When it does take place, the patient must generally undergo Lithotomy; but even then, he is not in a worse condition than he would have been before the invention of Lithotrity. He may possibly be in less favourable circumstances, from the irritation already produced by the Lithotritic process; in most cases, however, he will not. In a very unirritable patient, the detached piece of instrument might, perhaps, be attracted and drawn through the urethra with a magnetized rod, it might even find its way out spontaneously; but, since in most cases of this kind, Lithotomy must be performed without delay, the Surgeon should always have the requisite instruments at hand, as well as a magnet.

4. It has been stated, that, if the branches of the forceps cross each other, or become entangled in a hole of the stone, there is no possibility of withdrawing the instrument, without lacerating the urethra. This would certainly be a very embarrassing accident, and, although there is no evidence that it ever occurred, its bare possibility should induce the Surgeon to provide against it. If unable to put things right with a steel rod, he would be obliged to have recourse to an opening in the bladder, by the perinæum, through which he might disentangle the end of the instrument with his finger, or in case of this failing, cut it off with a pair of curved nippers I have had constructed for the purpose, and with which he should always be furnished. But, the best provision against such an accident, would be to have the branches of the forceps separate throughout, as recommended by Messrs. Costello and Guthrie, so that, by withdrawing the external tube, they might be removed one at a time.

5. Several eminent practitioners contend that the principle of reducing a stone in the bladder to fragments, is bad and untenable; they are of opinion, that the presence of these fragments, in so delicate an organ, is sufficient to produce dangerous inflammation; that the frequent application of the instrument required to destroy them, very often occasions the same result, and finally, that, in spite of the greatest skill and attention, one may remain unpulverized, and become the nucleus of a new calculus." 237.

Now, in answer to the last objection, or rather string of objections, Dr. King replies, that experience has proved that the fragments left after the lithotritic process do not give rise to inflammation, in the great majority of cases. Several applications of the lithotritic instruments can hardly be looked on as a serious objection, provided the risk is not materially increased, which it certainly is not. Lithotomy, it is true, is usually completed at once; but is the patient's convalescence accomplished in a day? If safety is increased by the sacrifice of time, that sacrifice should be cheerfully and unhesitatingly made. In fact, we cannot look upon this as an objection to lithotrity at all—it is merely a circumstance which diminishes its éclat, and derogates from its rapidity of cure and quantum of inconvenience. Are relapses more frequent after lithotrity than lithotomy? Probably they are so, although the cutting operation is well known not to be devoid of them. But if a relapse does occur after lithotrity, it is but, as Dr. King supposes a patient to exclaim, " only a little more grinding."

> "The opponents of Lithotrity have not failed to enumerate, at full length, the cases to which it is inapplicable: those where the stone is very hard, or very voluminous, or encysted; diseases of the prostate; urethræ originally very small, or contracted from strictures, have been much dwelt upon. In considering these dispassionately, it will be found, that they do not constitute any thing like a foundation for hostility to the general adoption of the operation. In some adults, where the urethra is naturally very narrow, it may sometimes be impossible to introduce the smallest instrument; but this is very rare indeed. And, in children, Lithotomy, well performed, loses three-fourths of its dangers, differing by its lenity, nearly as much as Lithotrity does, from the same operation performed on grown persons." 244.

This is the true state of the case. Take away these cases, and you have a great number to which lithotrity is applicable, and in which it may, and in all human likelihood will, become a means of safety. With respect to encysted calculi, the remark appears absurd. We would wish to know on how many cases of encysted calculi would the surgeon operate, knowing them to be such, or in how many would an operation be required! Such frivolous objections as these are like nibbling at the operation in committee; they come from the waverers.

> " After this enquiry into the principal circumstances connected with the treatment of stone, by Lithotomy and Lithotrity—in which we have attempted to place side by side, their respective dangers and advantages, by an appeal to facts, and thus to establish the degree of estimation in which each ought to be holden in practice,—our conviction is, that wherever Lithotrity can be employed, Lithotomy should never be thought of." 249.

PROPOSALS FOR THE TREATMENT OF CALCULI OF GREAT MAGNITUDE AND DENSITY.

The surgeon whose genius could devise or dexterity accomplish means of removing large calculi from the bladder with little, or even with less than the present risk, would unquestionably deserve well of his kind. Large calculi are the opprobrium of surgery. Lithotomy for them brings nothing but danger; to them lithotrity is confessedly inapplicable. Dr. King makes some proposals for their treatment which we shall lay before our readers.

We need not repeat that a great, perhaps the greatest danger in the operation of lithotomy is a large incision. Yet, whenever the calculus is of great dimension we must either make an incision fatally extensive, or commit a laceration yet more destructive. We are on the horns of a dilemma, and, do what we will, experience has proved that lithotomy for large calculi is too generally unfortunate.

> "The principle of Lithotomy—Lithotomy of the safest and best kind—is, then, to have the *incision* proportionate to the *size of the stone*. Now, what I would suggest is, that this principle be reversed, and that the *stone* be reduced to the limits of a tolerably safe incision. In Lithotomy, the rule is, to adapt the *wound* to the *calculus*; whereas, I propose, adapting the *calculus* to the *wound*. This new plan may be called perinæal Lithotrity." 252.

Such is the principle which guides Dr. King. It has been remarked that when large calculi have broken in the forceps, previously to their extraction, the patient has recovered more frequently than when no such accident has happened. The breaking of a large calculus by the lithotomist appears to the inexperienced spectator a misfortune, yet it may be questioned if it be not the reverse. Dr. King's propositions are founded on the good effects, real or reputed, of this very accident. In short he proposes to break the calculus, after making an opening, a small opening, into the bladder in the usual manner from the perinæum.

"In order to meet the objection founded upon the inconvenience of scattering the bladder with fragments, I have endeavoured to devise means for enclosing the calculus in a bag, prior to breaking it to pieces. The instrument I use for the purpose is a light forceps, having the upper blade split into two branches, which are made to open and shut, and to which the end of a bag is adjusted for receiving the calculus. When the latter is pressed in the forceps, at the same time that the branches of the upper blade are gradually expanded, it necessarily passes between them into the orifice of the bag, in which, by continuing the pressure it becomes finally enveloped.

The next object was to find the best means of breaking the stone, in the quickest possible time. I tried several instruments, some constructed on the model of the forceps of Andreas à Cruce, with long strong branches, and wedge-shaped teeth in the blades; others having a contrivance for breaking the stone with a wedge or percussor; and one like that used by Baron Heurteloup for breaking calculi by percussion. Those of the first kind are the most simple, and give the least trouble in seizing the stone, and as they are extremely powerful, few calculi will resist their action. With the others, the hardest calculi may be broken, but they do not offer the same facility for grasping them.

The operation is performed in the following manner. The patient, who should be prepared as before submitting to Lithotomy, is to be placed upon Baron Heurteloup's bed. I introduce into the bladder a slightly curved staff, which is held by an assistant, nearly on the median line, whilst I make an incision up to it through the perinæum. This incision, about an inch and a half long and extending from a central point about an inch and a half below the inferior part of the symphysis pubis towards the left side of the anus, is made in two or three strokes with a straight, pointed knife; one serving to open the urethra from the left side of the bulb backwards, as in Lithotomy. I use Blizard's knife, or a sheathed instrument, to extend the opening to the anterior part of the prostate. A small conductor is then passed through the opening into the bladder, in the groove of the staff; and the latter being withdrawn, I exchange the conductor for the forceps. Thus far the operation differs from Lithotomy, only, in as much as the incision is made just sufficiently extensive to admit the forceps. In introducing the latter, the principal part of the bag, previously oiled, is kept close to the double or upper blade, which, when the stone is grasped, is to be gradually opened. As soon as the calculus is completely enclosed, the branches are to be shut and brought near the wound, in order that the end of the bag may be made secure and detached from them. The forceps is then to be withdrawn. It is through that part of the bag hanging out of the wound, that the instrument for breaking the stone is to be introduced, guided by the finger or a conductor; and, as the patient is placed in the position required for seizing the foreign body in Lithotrity, the stone, which cannot escape from the bag, will be easily grasped." 259.

To this proposal there may be some objections, but Dr. King believes that the chief will lie against the apparatus, and this may admit of improvement almost to an indefinite extent, at least that improvement can only be limited by human ingenuity. The risk of fragments remaining in the bladder is an evil; yet supposing them not removed by the means in our power, they can leave but the necessity for future lithotrity. We must recollect that in this case we have only a choice of evils.

> "The length of time required for the performance of the operation, and the necessary pain and irritation attending it, constitute another objection to perineal Lithotrity. But, again, we ask, whether they endanger the life of the patient? What does reasoning upon analogy, what does experience teach us on this point? In Lithotomy, it is not the frequent introduction of instruments, or the time employed, that renders the operation dangerous, but the extent of the incision or the force employed to extract the stone; and, when hemorrhage is avoided, when we are secure from infiltration of urine, when the bladder has not been forced or the prostate lacerated, we may expect a successful result." 263.

In those desperate and deplorable cases, where the calculus is too large to admit of even this proposal being carried into effect, Dr. King recommends another plan. We are sorry that our exhausted space compels us to pass it over. Our own opinion is this, that in cases of such extremity, the result is but too probably unfortunate under any method of procedure, or any plan of treatment. Mankind will reap more benefit from the early discovery and removal of small stones, than from any inventions in the treatment of large ones. At the same time, we would not discourage attempts to mitigate the dangers of their extraction.

A chapter on calculus in the female bladder contains nothing of particular moment. The last division of the work consists of General Remarks on the Treatment of Calculi. In our full analysis of the able and practical lectures of Mr. Brodie on calculous disorders, their nature and treatment were so fully considered, as to render it unnecessary for us to dwell on them again. We may take the opportunity, however, of stating, that we think Dr. King's reflections indicative of judgment and reflection. But we do not quite agree with him on every point. He says, for instance, that the ammoniaco-magnesian diathesis certainly originates in a diet of too animal a nature, and, therefore, recommends the use of vegetables. That too much animal food, especially when conjoined with sedentary habits and late hours, will cause the deposition of the triple phosphate in the urine, we have the best means of knowing, having lately witnessed a well-marked instance of this description. But we doubt whether this be generally the case; indeed, we know that the triple phosphate is usually the deposition of debility—remedied by all that invigorates, augmented by all that weakens. In illustration of this principle, we refer to the excellent work of Dr. Prout. For this reason, general bleeding is seldom admissible in the triple-phosphate diathesis, and the surgeon should be cautious how he employs it.

Dr. King feels himself justified in stating, that the formation of the oxalate of lime gravel coincides with the use of coarse, indigestible food, in which animal matter does not preponderate. The causes of this diathesis have hitherto been a problem; but the deposition of the oxalate of lime in the urine appears to be connected with the formation of acid, rather than alkali, in the system, as is proved by its occasional alternation with the lithic acid in calculous concretions. Dr. King observes that in one case, in which he exhibited citric acid against oxalate of lime gravel, it succeeded perfectly. Dr. King very properly insists on dietetic rules and restrictions. It is worse than a farce to meet acid or alkali in the urine by alkaline or acid medicines, when the habits and the food which occasioned the morbid character of the secretion are allowed to be persisted in. For our own parts, we would infinitely rather throw physic into the Thames, and trust to regimen and general means only in the treatment of affections of the urinary organs, than appeal to pharmacy, to the exclusion of these most important agents. We speak advisedly; and we cannot but believe that the chemistry of the urine may possibly prove an ignis fatuus to some, and lure them from the high road of common experience and common sense.

We must now bring this article to a termination. We are not in the habit of pronouncing those oracular pieces of criticism, which seem to us of no use but to flatter or to hurt the feelings of authors. We do not wish to crucify an unfortunate writer, or exhibit him writhing under the lash of public ridicule or vituperation. We war with nothing but impudent assumption—want of principle—with doctrines or with practices calculated, in our opinion, to be mischievous to the community. If books are good, we endeavour to make the public fully acquainted with them; if indifferent, we usually pass them unnoticed. Silence is our censure—notice is our praise: by the former we lacerate no feelings—by the latter we accomplish a public good. We need say no more, then, to Dr. King than our review has told him; this is not a courtly compliment, but it is better—it is an honest one.

II. *bis.*

OBSERVATIONS IN SURGERY AND PATHOLOGY; ILLUSTRATED BY CASES, AND BY THE TREATMENT OF SOME OF THE MOST IMPORTANT SURGICAL AFFECTIONS. By *William Jones Clement*, Surgeon. Octavo, pp. 230. London, 1832.

Mr. CLEMENT, the author of the volume before us, is a surgeon residing and practising at Shrewsbury. We believe that he has enjoyed a tolerably extensive private practice, and his object in publishing the present work is to communicate the results of his experience, to correct some errors which he imagines to be established, and to narrate some cases of surgical affections not commonly witnessed. Such objects cannot be otherwise than laudable, and we hope that others of our able and experienced provincial brethren will follow the example now set them by Mr. Fletcher, of Gloucester, and Mr. Clement, of Shrewsbury. The first portion of the volume consists of a critical inquiry into the different opinions respecting the structure of the urethra, and an attempt to refute the doctrines of Sir Everard Home; the second contains some cases of strangulated hernia; and the third is made up of several isolated cases—spina bifida, aneurysm by anastomosis, lithotomy in a female child, tumour attached to the biceps flexor cubiti, tumour attached to the lower jaw, and, finally, remarks on Sir Charles Bell's discovery of the functions of the facial nerves. Such are the many-coloured contents of the book, and it may be supposed that we do not pretend to offer an analytical review of them. In consequence of the narrowed limits of the review department, our notice here must be very brief; but we shall endeavour to supply, in the Periscope, an abstract of the most curious and interesting facts.

The first portion, that which treats of the urethra, need not detain us long. It is chiefly occupied with the refutation of Sir Everard Home's opinions on the muscularity of that canal. We believe that few surgeons now believe, or anatomists inculcate, such a doctrine, and it would be felling a man of straw to reiterate the arguments and proofs against it. The only part of the paper to which we think it necessary to direct attention, is one in which allusion is made to the nature and treatment of that difficulty in making water which not unfrequently succeeds gonorrhœa.

> "The fears of patients are frequently excited, by the stream of urine appearing smaller than usual after their recovery from the acute symptoms of gonorrhœa; and they actually may experience some difficulty in voiding it; this they of course attribute to the formation of a stricture, whereas it more frequently depends upon the want of elasticity in the canal, produced by the previous inflammation; and some degree of thickening may probably exist as the consequence of it, but which will gradually subside, if the canal be not interfered with, or irritated, by the passing of instruments.
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> So convinced am I of the impropriety of, and the bad effects which arise from, the use of bougies, in what are supposed to be cases of recently-formed strictures, that whenever I am consulted by patients who have some difficulty in making water, and express their fear of the formation of a stricture, I invariably object to the introduction of the bougie, if, upon enquiry, I find that they have only recently recovered from gonorrhœa. My practice, in such cases, is to direct a small quantity of the Linim. Hydr. Camphor to be rubbed along the line of the urethra every night and morning; and it has always happened that those patients, who have had confidence to pursue this plan and give it a fair trial, have returned to me in the course of a short period, declaring themselves perfectly free from any obstruction, or difficulty in making water." 39.

If obliged to sound the patient, our author has generally found one tender point in the urethra, about three or four inches from the orifice. Both the bougie within, and pressure from without, produce a sensation of soreness and pain here, and Mr. Clement imagines that a slight degree of inflammatory action, lurking in the part, is the cause. In some examinations after death, which he has had an opportunity of making, he has found redness, vascularity, and a degree of firmness in the membrane of the urethra at this spot. In such cases, Mr. Clement avoids the bougie, although it is too frequently employed in them, under the supposition of the existence of a spasmodic stricture. Mr. Clement's plan of treatment is, to direct the application of leeches as near as possible to the part affected, and repeat them once a week for a month, or longer if circumstances require it, giving, at the same time, full doses of the liquor potassæ. When the sensation of soreness is removed, he advises the application of the linimentum hydrargyri camphoratum. After the diligent employment of this method for some time, he has been enabled to pass a full-sized bougie into the bladder without difficulty or the production of pain. We have drawn attention to this mode of practice, because we know, from experience, that it is successful. We have seen many instances of diminished stream of urine after gonorrhœa, which by mild and unirritating treatment has been removed, and has not subsequently terminated in stricture. We agree with Mr. Clement, that the bougie is not only not required in such cases, but must prove absolutely prejudicial in many.

We pass to the subject of hernia, or rather to the cases of this disease; for the remarks are only in the form of notes upon these, as they are detailed.

CASE 1.—*Strangulated Inguinal Hernia—Operation—subsequent Protrusion and Mortification of Omentum.*

Mrs. B. æt. 49, who had long been subject to reducible inguinal hernia, but worn no truss, was seized with the symptoms of strangulation in the night of the 5th of November, 1823. The operation was not performed till the evening of the 6th, two large bleedings, with the warm bath and taxis, having been ineffectually employed in the interim. The contents of the hernial sac were found to be a considerable portion of omentum, and below this, three or four inches of small intestine, firmly strictured and exceedingly livid. The stricture was formed by the neck of the sac. The principal symptoms subsequent to the operation were, retention of urine for a day or two, and, on the 8th, some fever, with shooting pains in the loins and bowels. On the 9th she was better, and in two or three days the wound was, to all appearance, closed, and the patient in a very favourable condition. In straining to evacuate the bowels on the 13th, the wound opened, and a considerable piece of omentum was protruded. When the patient was visited it was impossible to reduce the omentum, now as large as a billiard-ball. It became strangulated, sloughed, and separated, without the occurrence of an unpleasant symptom. The wound was perfectly healed on the 2d of December.

Mr. Clement, like all judicious surgeons, is a warm advocate for an early operation in cases of strangulated hernia. The operation is rarely dangerous—delay almost always is so. He is also inimical to the use of the tobacco enema, because he has seen it prove fatal, because he has never seen it beneficial, because its good effects may be obtained by the warm bath and bleeding without the risk of its bad ones, and because it not only protracts the performance of the operation, but probably renders the patient worse calculated to bear it and less willing to submit to it. Mr. Clement objects to active purgatives before or after the operation. If aperients are necessary after it, they should be mild ones, and enemata are usually to be preferred.

Case 2.—*Strangulated direct, or Ventro-Inguinal Hernia—Operation—Epilepsy afterwards.*

Wm. Giles, æt. 29, iron-founder, robust and temperate, had been subject, for six years, to a small hernia, for which he wore no truss. In the morning of the 19th January, he felt the hernia descend lower, and was attacked with symptoms of strangulation. At 7, a.m. Mr. Clement saw him. He was suffering great pain. The hernial tumour was of the size of a common lemon, and, on examination, Mr. C. discovered that it was of the direct, or ventro-inguinal description. Mr. C. bled him to syncope, employed the taxis, produced syncope again in the warm bath, and again employed the taxis without success. Six hours had now elapsed since the commencement of symptoms of strangulation, and at 1, p.m. the operation was performed.

> "After the integument and superficial fasciæ were freely divided, the spermatic cord was seen running obliquely across the lower part of the wound. I pushed it gently downwards, and directed my assistant to place his finger upon it. The layers of fasciæ covering the hernial sac were very thin, and it was difficult to distinguish the difference between the true peritoneal covering and the intestine which was seen through it, presenting a very livid colour.
>
> The sac was cautiously pinched up, taking care to avoid including any portion of the intestine; then, holding the knife horizontally, I made a small opening into it, which was afterwards enlarged by the bistoury. It was not until the sac had been freely opened, that any serum escaped, and then only a very small quantity. About three inches of the jejunum was exposed, in colour more resembling

a ripe plum than any thing else with which I can compare it. The greatest caution was required in passing a very fine director into the neck of the sac, which was very firm, and formed the stricture. Previous to its division, I pressed my little finger gently against it, and felt the pulsation of an artery, which, from its situation, must have been the epigastric. The neck of the sac was divided in a direction upwards, but inclining a little inwards towards the pubes." 77.

At 7, p.m. the bowels had not been opened, there was occasional sickness, the pulse 120, full and strong. *V.S. ad* ℥xxiv. blood not buffed. At 5 o'clock next morning the symptoms continued, with extreme tenderness of the abdomen; castor oil, which had been given, had not operated. *V.S. ad* ℥xxx. *Enema, salin. c. tart.-emet.* blood much buffed. The symptoms were the same in the evening, and next day the right testicle was swollen. The tenderness of the abdomen was gone—he was very low—the bowels had been opened by the enema, but not since. *Ol. ric.* ℥ss. The oil acted on him very violently, and in the evening his pulse was fluttering, and he seemed to be sinking. It required the utmost attention, with the regular exhibition of wine and water, brandy and water, &c. to enable him to rally. Ultimately the patient recovered completely. In the course of a month after the healing of the wound, the patient was seized with epilepsy. The fits occurred at first every two or three days; but the intervals between them gradually became longer, and under the administration of the pil. cupri ammoniat. they finally disappeared, and there has been no recurrence of them for the last two years.

It is probable, as Mr. Clement remarks, that the depletion resorted to and the debility which it produced were the causes of the epileptic fits. We have seen epilepsy follow great depletion and low living after injuries of the head, and have seen it disappear when tonics and better diet were employed. Whether the depletion was or was not too active in the present case, we will not pretend to say, but we are certain that depletion is sometimes employed too freely after the operation of hernia, as well as after other operations and accidents. Mr. Clement has not seen another instance of affection of the testicle after this operation. We have seen the testis slough after it in a patient in St. George's Hospital. We have also twice seen hernia humoralis after the operation of lithotomy.

The next case detailed by Mr. Clement, is, practically speaking, a very instructive one. The patient was 70 years of age, the hernia femoral, the bowels had not been opened for six days, and symptoms of strangulation had existed for five. On performing the operation the gut was found very livid but firm in structure, the coats indeed being greatly thickened; it was also firmly adherent to the neck of the sac. These adhesions were separated and the gut returned. After the operation the patient was much exhausted, and a cordial with mutton broth was administered. The pulse intermitted on the next day and continued to do so until the patient was out of danger. In the night of the fourth day the patient was seized with a rigor, and on the fifth day presented symptoms of acute pneumonia. The pulse was 94, but intermitting. She was bled to ten ounces, a blister applied, and salines with expectorants exhibited. The pneumonia was checked, and, although some sloughing took place about the wound, the patient was able to walk about in the course of a month after the operation.

Mr. Clement makes some remarks on the intermission of the pulse after the operation. The fact is, that this is a very frequent occurrence after severe operations or injuries in elderly persons. We have seen it after the operation for hernia several times, after the operation of lithotomy, after amputation, &c. Some patients recovered, others did not; and although, as we have already stated, we must even look for this symptom in old people almost as a matter of course, yet it is generally an unfavourable symptom. We may mention a case or two out of several to shew that it is by no means a necessarily fatal one. A woman, 70 years of age, had a large 'hydatid' breast removed by Mr. Brodie, at St. George's Hospital. After the operation suppuration occurred in the wound, low symptoms followed, and for many days the pulse intermitted. She recovered. A very old woman had the operation for hernia performed by Mr. Hawkins, in the same hospital. Intermitting pulse succeeded, but the patient recovered from this and from the effects of the operation, although she died bed-ridden some little time afterwards. An old woman fractured the neck of her thigh-bone. Intermissions of the pulse succeeded but ceased under generous diet and stimulants. She died however at the end of a month or six weeks. Elderly persons, or those whose constitutions are debilitated by debauchery are liable to present intermissions of the pulse when attacked by erysipelas, or diffuse cellular inflammation. The symptom is then all but fatal.

Case 4.—*Strangulated Umbilical Hernia—Operation—Death.* The patient, a very corpulent woman, aged 70, had been subject to umbilical hernia for many years but never worn a truss. The hernia became larger whilst she was endeavouring to evacuate her bowels, and soon afterwards the usual symptoms were set up. The taxis was thrice employed, she was bled freely, took purgative medicines, had two enemas, and was again bled previous to the operation. When this was performed the tumour was red and inflamed from the handling at the superior part. Mr. Clement made an incision three inches long at the side of the tumour, exposed the sac which was thin and transparent, and found that it contained intestine only. The stricture was at the umbilical opening, almost cartilaginous, and very narrow. It was divided in a direction towards the linea semilunaris. The intestine was of bright red colour; it was gradually returned. There was excessive tenderness over the belly in the evening. She was bled to 15 ozs. and had calomel, &c. On the next day she was bled again to 14 ozs. On the following morning the pulse was fluttering, and on the next morning she died. We find no notes of a cadaveric examination, indeed our author seems to have had few opportunities of obtaining knowledge in this way, if we may judge by the fatal cases already before us. It would be a trite truism to make any observation on the necessity and value of such an addition to a fatal case.

It is true that the operation for umbilical hernia in aged women succeeds but seldom. But we think it also true, or at all events probable, that the active depletion and other treatment adopted prior to the operation were not calculated to increase the chances of success in the present case. Mr. Clement has always found umbilical herniæ to consist of portions of the colon with omentum, and never saw small intestine in the sac. In a fatal case of umbilical hernia which we lately witnessed, small intestine was contained in the sac, and we should not think this circumstance usually so rare as it has proved in Mr. Clement's practice.

"Two reasons induced me to make the first incision on the side of the tumour, and not along its upper or most prominent surface. The principal one was the inequality or irregularity of the peritoneal sac which is usually met with at the front of the rupture : indeed it generally happens that the several parts are so much consolidated that the true sac cannot be easily distinguished, although I do not agree with some writers who suppose that it is entirely wanting, or does not extend upwards so far as to form an entire covering to the contents of the tumour. The second reason was, the red and inflamed condition of the integument covering the front of the rupture, produced by the repeated and long-continued use of the taxis. If an incision were made in that part, I thought the wound would not heal by the first intention, but in all probability would be followed by sloughing : a circumstance much to be dreaded, and more particularly in this species of hernia.

I once saw a very celebrated surgeon operate in a case of large umbilical hernia :—he made an incision along the whole length of the tumour, and afterwards opened the sac to its fullest extent. An immense quantity of omentum and intestine was immediately exposed ; the convolutions of the latter were exceedingly troublesome ; and I well remember that two pairs of hands were required to confine them before the operator could venture to divide the stricture, and when this was accomplished, a considerable length of time elapsed before every portion of the bowel could be replaced within the abdomen." 106.

There is one danger in making the division of the stricture laterally, and that is the liability to wound the internal branch of the epigastric artery. Perhaps this is in general of little moment. We fancy that the notion of a peritoneal sac being absent in umbilical hernia is unfounded.

The next case is also instructive. The patient, Mrs. M., aged 77, very thin but active, had symptoms of strangulation in a previously reducible femoral hernia for seven days before Mr. C. saw her. In performing the operation he met with considerable difficulty in consequence of the firm adhesions of the sac and its contents. Feeling omentum above he scratched through the sac into the omentum, and pushed a bistoury up to the stricture through its substance but close to the sac. The adhesions of the omentum to the lower part and sides of the sac were necessarily torn through before the gut could be exposed. It was small, livid, but firm. It adhered to the bottom of the sac; the adhesions were divided and the intestine returned. After the operation the patient was so exhausted as to require stimulants and support. She rallied, but again sank in a day or two afterwards into an alarming state of depression, from the effects of a dose of castor oil. From this she was happily recovered, and was perfectly well in less than a month after the operation.

Here this article must terminate, not for want of other and equally useful cases, but for want of space on our parts for their insertion. Those which we shall find most adapted for our purpose will be noticed in the Periscope department. The nature of the work will be apparent to our readers; it is a plain unvarnished record of the experience of an active and practical provincial surgeon. Would that his brethren and coadjutors in all parts of the kingdom would follow his example, and rescue their names from something like the reproach of inactivity, we mean on the score of communicating their knowledge to the world, which now attaches to them. These are times for all men to bestir themselves, and the period is approaching when the field for professional exertion and professional honours must be laid more open than it is at present. Let the surgeons of the empire prove that they are worthy of attention, and if prepared to demand, they will obtain it.

III.

A TREATISE ON RETENTION OF URINE, CAUSED BY STRICTURES IN THE URETHRA; AND ON THE MEANS BY WHICH OBSTRUCTIONS OF THIS CANAL MAY BE EFFECTUALLY REMOVED. By *Theodore Ducamp*, Doctor of Medicine of the Faculty of Paris, &c. &c. Translated from the French, with Notes and Additions, by *William M. Herbert*, M.D. Octavo, pp. 219—five Plates. New York, 1827.

WE believe we may assert, without fear of contradiction from those who are well informed upon the subject, that the diseases of the urinary organs are at present better understood and better treated in this, than in any other country. The works of Hunter, Home, Wilson, Bell, and the recent papers of Brodie, in the surgical department, with the modern chemical investigations of foreign, as well as British chemists and physicians, and last, not least, the labours of Dr. Prout, have increased our information and improved our practice in a degree almost unprecedented, in so short a space of time and in so difficult an investigation. It is generally imagined that our treatment of strictures is superior to that of the same disease by the French surgeons; and from what we have read, as well as from what we have heard, we imagine that the preference is a just one. The employment of force and violence is too much abused by the French, and one great object of the work we have now before us is to discountenance this very abuse. The following quotation, from Deschamps, gives an instance of violence on the part of one of the ornaments of Gallic surgery.

> "Desault, who had the reputation of the greatest skill and dexterity in the introduction of the catheter, and who has chiefly emboldened surgeons by his example to employ force for this purpose, deviated, like others, and even very widely, from the axis of the canal. The following fact is a remarkable proof of it: it is related by M. Deschamps, to whom it was communicated by M. Garre. Being called in the year 1795 to a patient who had great difficulty in making water, he (M. Garre) was much surprised to find him make use of two chamber pots, the one to receive the urine which flowed by the usual course, and the other to catch that which was voided by the anus. He learned from the patient, that in an attack of retention of urine, which he had suffered, Desault found great difficulty in passing the catheter, and therefore had had recourse to force, by which he succeeded in evacuating the bladder. There can be no doubt that in this case, the point of the instrument had perforated the mucous membrane of the urethra and the rectum, and afterwards passed through the intestine, again to enter the bladder above the prostate. Cases like this would appear very interesting to compare with the precept above inculcated—but unfortunately, these are not the cases which usually embellish our journals. (Deschamps.)
> Traité historique et dogmatique de l'operation de la taille. Vol. I. p. 238." 63.

Our object is not to analyze this treatise, nor even to offer a formal critique upon it. The author proposes a new plan of treating strictures, and we shall merely present this to our readers as briefly as we are able. Their treatment he considers as essentially founded on a two-fold indication: *to destroy the morbid disposition of the parts which form the stricture, and to re-*

duce them to a level with the rest of the canal. In order to effect the destruction of the stricture, the author recommends caustic as the most efficient means, and the dangers and inconveniences which have hitherto occasionally followed its employment, have been owing, he thinks, to the manner of using it. The caustic should come in contact with nothing but the stricture, but should touch it, from within outwards, throughout its whole extent. For instance, if the stricture should be seated at the upper part, the caustic should be applied to that only, and so on. It must be obviously necessary to ascertain the exact site of the stricture, previous to following this recommendation.

> "It is important to determine with precision at what distance from the orifice of the glans, the stricture we propose to treat is situated. For this purpose the canal must be explored with a catheter of middle size, in order that it may pass readily through the sound parts of the urethra, and be arrested by the first strictured point that it encounters. It is customary to employ a plaster bougie on which a mark is made with the nail near the orifice of the glans. I make use of a hollow bougie of gum-elastic, of the size No. 6, on which are marked the divisions of a foot rule. On introducing this bougie, I always know the distance to which it has penetrated the urethra; and when it is stopped by a stricture I perceive immediately that such stricture is at the distance of so many inches and lines from the orifice, which I note down.
>
> Having ascertained this point, I immediately proceed to the examination of another, which is the situation of the opening in the stricture. In order to do this, I take an impression of the stricture in wax, and I obtain in relief the form of its interior extremity. For this purpose I make use of the following instrument, which I call an *exploring catheter*. I have catheters of the Nos. 8, 9, and 10, open at both ends, and marked with the divisions of the foot; the anterior opening of these instruments must be about half the size of the other; I take a bit of sewing silk, and having tied several knots in it, and dipped them in melted wax, I round off the wax in the manner represented in fig. 7, plate I. By means of a bit of edging I pass the silk into the catheter, entering at the larger opening; when it has reached the other opening, the bulb formed by the knots covered with wax is detained, while the silk passes on and forms at the extremity of the catheter, a pencil of fine downy threads, both soft and strong; or else I pass the bit of flat silk through four little holes situated near the end of the instrument, and uniting them together in a knot, I afterwards spread them out in the form of a pencil. This pencil is soaked in a mixture composed of equal parts of yellow wax, diachylon, shoe-maker's wax, and resin; I take a sufficient quantity of it to enable it when rounded off to equal the bulk of the catheter. I let this *moulding wax* grow cold, and softening it between my fingers, roll it upon some hard polished surface. I cut this kind of bougie added to the gum-elastic canula, at about two lines from the extremity of the latter, and round off the wax like the end of a catheter. By this arrangement, the moulding wax, mingled with the filaments of silk, becomes incorporated with them, and cannot fall off. I introduce one of these catheters into the urethra, and after I have arrived at the stricture, I leave the instrument in its place for a few moments, in order that the wax may have time to grow warm and soften, when the catheter is pushed forward; the wax being thus *pressed* between the catheter and the stricture, fills all the sinuosities of the latter, enters its opening, and, in a word, is moulded according to its figure. The catheter being completely withdrawn, I find at its extremity the form of the stricture.
>
> If the projection of wax which has entered the stricture, be in the middle of the lump of the same material which terminates the catheter, I perceive that the projecting parts which constitute the stricture, are equally distributed around

the opening, and that the whole circumference of the latter is to be cauterized. But if it be at the upper part that the projection to be destroyed is situated, at the lower side; if, on the contrary, it be at the inferior part, I know that the caustic must be directed to the upper portion, and in like manner of the sides. By this means I can always procure the shape of the stricture, and ascertain all the changes that it undergoes in the course of the treatment. In a word, I can ascertain as clearly what takes place in the stricture at the deepest part of the canal, as if it were exposed to my sight." 107.

Some precautions are necessary in the use of this "exploring catheter," but for these we must refer to the book itself. In order to determine the length of the stricture, that is, its extent from before backwards, Dr. Ducamp has small cylindrical bougies of gum-elastic, which he covers with moulding wax, by taking several filaments of flat silk, soaking them in the wax melted, then winding this silk thickly coated with wax round the bougie, and rolling the latter between two polished bodies. This bougie is introduced, suffered to remain in the stricture a few moments, and when withdrawn it bears a furrow, the extent of which denotes that of the stricture. But this plan can only answer in cases where the bougie will enter the stricture; in some it will not, and then M. Ducamp has another expedient.

"Having taken an impression of the stricture, we know whether its opening be in the middle, above, below, or at either side: we want, therefore, an instrument which will enable us to direct at will, the point of the bougie to the middle, upper, lower, or lateral part, in order that it may correspond with the aperture in the obstacle, and enter it.

To effect this, I make use of an instrument which I call a *conductor*. It consists of a gum-elastic catheter, of the size, No. 8 or 9, eight inches in length, open at both ends, and marked, like all my other instruments, with the divisions of the foot. I close the anterior extremity of this instrument, with a stopper of wax and silk, in order that the fluids in the urethra may not penetrate the interior of the conductor, and I mould this waxen stopper on the end of the catheter, so as to give it an uniformly rounded extremity. The instrument being oiled, is introduced down to the stricture, and the stopper is withdrawn. When the orifice of the stricture is in the centre, the canal forms, at the strictured part, a section of a cone, having at its apex the aperture through which the bougie is to pass. Now, my conductor also represents a section of a cone, open at its top, and the consequence is, that when the conductor is applied against the obstacle, its opening corresponds with that of the latter; so that a bougie necessarily enters the orifice of the stricture so soon as it has passed that of the conductor. To this we may add, that the bougie cannot vacillate in the conductor, and you may be certain that the introduction of a bougie by this method, is always very easy, when the opening in the stricture is at the centre.

When this opening is situated above, below, or at either side, the canal still represents in the strictured part, the section of a cone, but the opening is not at its summit; accordingly the opening of the conductor will not correspond with it, but with some solid part; the conductor, therefore, which I have just described, would not answer in this case. I then employ a conductor which has an eminence of a certain size at one of its sides, near its extremity. By this arrangement the orifice of the conductor is no longer in the middle of the instrument, but on one side. Having ascertained by the form of the impression, that the aperture in the stricture is situated at its upper part, I introduce the conductor, and turn downwards the eminence which it has at its extremity; the opening is thus turned upwards, and corresponds exactly with that of the obstacle, so that a bougie passing from the one, necessarily enters the other. If, on the contrary, the opening in the stricture be at the lower part, I direct the emi-

> nence in the conductor upwards; I turn it to the right when the aperture is at the left, and to the left when it is at the right; so that I direct at will the point of the bougie into the orifice of the stricture. We here perceive how just is the observation quoted by the learned and scientific reporter of the Royal Academy of Sciences, '*to be able to explore is a great part of the art*;' for the method of exploration above described, has reduced the introduction of bougies, formerly so uncertain and hazardous an operation, to a mathematical certainty." 110.

The bougie must be proportioned to the calibre of the stricture, and force must never be employed. M. Ducamp avers that by this method he always succeeds.

> "I usually employ bougies which are not much more than eighteen lines in length, and I fasten them strongly on a tube of gum-elastic *Taille en biseau*, with waxed silk with which I form a bulb, that rests against the anterior opening of the conductor, which is less wide than its canal. On this tube of gum-elastic, or *porte-bougie*, I make two marks; one, which is at the entrance of the conductor when the bougie is about to pass out of it at the other end, indicates that the point of the instrument is in contact with the stricture; the other mark, about eighteen lines distant from the former, shows that the bougie has entered. When I wish to enlarge a stricture, I introduce, in the first place, a bougie with a well rounded point, or with one perhaps a little larger than the body of the instrument, in order that the latter may encounter no more resistance after the former has passed the obstacle. I immediately withdraw this bougie, and substitute another of similar dimensions as far as its middle; thence it increases in size to its other extremity. During the introduction this bougie passes easily, as far as its centre; when we have arrived at this point, resistance is felt; we may then press without fear of making a false passage, for the point of the bougie has traversed the obstacle, and the resistance met with is exercised upon the sides of the bougie, which distend the parietes of the stricture. I next secure the bougie and the conductor, and suffer them to remain in the urethra for half an hour; and if it appear necessary in the progress of the treatment, I repeat the operation the following day." 112.

M. Ducamp can also ascertain the extent of the stricture by means of another instrument, but we cannot stop to describe it. The preliminary knowledge necessary for proceeding to the destruction of the stricture having been acquired by these instruments and manœuvres, we are next presented with our author's means of arriving at that desirable result. It is by means of what he terms a *porte-caustic*. We are sorry to be necessitated to resort to so many extracts, but the nature of the descriptions renders it utterly impossible for us to abbreviate them more than we are doing.

> "This instrument consists of a very pliable canula of gum-elastic, of the size No. 7 or 8, eight inches in length, (Pl. III. fig. 2.) and of a platina case or sheath eleven lines long, and of the same calibre as the gum-elastic tube. (Pl. III. fig. 3.) This sheath has *externally* one turn of a screw, by means of which it may be fitted to the gum-elastic tube, and be made continuous with it; at its other extremity is another screw, two lines and a half in length, on which is placed a little nut, (Pl. III. fig. 16.) rounded at its anterior extremity, and perforated in the middle to afford a passage for the central shaft of the instrument. The interior of the sheath presents, through one half of its circumference, two projecting ridges, which extend to its extremity, leaving between them on each side, and at two points diametrically opposite, a vacant space, which forms a groove from top to bottom. A cylinder of platina, ten lines long and one in diameter, attached to a gum-elastic bougie eight inches and a half in length, which serves as a handle to it, (Pl. III. fig. 5.) completes the instrument. This cylinder of

platina has, five lines from its anterior extremity, a pin which extends beyond it for a quarter of a line right and left. At the distance of half a line below this pin, there is a deep furrow three lines in length and nearly three quarters of a line in breadth; thus prepared, the shaft represented in Plate III. fig. 5, being introduced into the gum-elastic canula, and the platina sheath being firmly screwed on the tube, the extremity of the cylinder *b*, fig. 5, extends a little beyond that of the sheath *e*, fig. 4; and we have the instrument as represented by fig. 6. But if the shaft be pressed, the little cylinder of platina leaves the sheath, and the instrument appears as represented in Pl. III. fig. 7. When the groove *ff*, fig. 7, designed to contain the caustic, appears externally, its superior extremity is even with, and even somewhat covered by the sheath of platina, which terminates the gum-elastic tube. The platina nut being three lines in diameter, cannot enter the stricture, but rests upon its anterior surface, while the little cylinder of platina enters the opening of the same stricture, and applies to it three lines of caustic, which is directed at will, above, below, or laterally, and by means of which, consequently, we may cauterize a single point of the circumference, a greater or less extent of it, or even the whole, by giving certain motions to the instrument. Let us illustrate it by examples." 114.

The manner in which the caustic is directed to the stricture in different situations is accurately illustrated by examples, but we have not space for their insertion. M. Ducamp avers that its effects are really astonishing. A second, or at farthest a third, application is sufficient, in the majority of cases, to enable the patient to pass his urine with perfect freedom. After the first application M. Ducamp waits for three days without doing any thing. He then takes a new impression, to ascertain the state of the parts; passes a bougie by which he learns if there be but one stricture, and then repeats the application of the caustic, directing it to the most prominent parts. In three days more a new impression is taken, and if the stricture projects little, a bougie, No. 6, may be passed with ease. Unless the stricture still projects considerably he makes no farther application of the caustic, but proceeds to dilate the canal by means to be yet described. A second and a third stricture are successively attacked in a similar manner. If the stricture be deeper in the canal than six inches, the instrument must be slightly modified to accommodate it to the urethral curve. The extent of the application of the caustic must be proportioned to that of the stricture, but if the latter should be very long it is better to destroy it progressively by different applications of two or three lines each. The quantity of caustic expended each time should not exceed the tenth of a grain; the less caustic possible for the destruction of the stricture the better. The groove in the porte-caustic is filled with the nitrate of silver, by placing two little bits of it in the groove, and melting these carefully in the flame of a spirit lamp; if the caustic does not lie evenly, it must be levelled by a piece of pumice-stone. The groove holds nearly half a grain of caustic, but by suffering the instrument to remain for a minute only, not more than a third is dissolved. No force must be used with this instrument, nor must caustic be used whilst the canal is in a state of inflammation. Having proceeded thus far, the object that remains is to effect an adequate dilatation of the urethra, and, as M. Ducamp words it, "to obtain a CICATRIX of the calibre of the urethra in its natural state." For this purpose he employs two instruments, a *dilator* and a *bellied bougie*. It will be remembered that Mr. Arnott has proposed as a dilator, a catgut bag which he fills with air. The original proposal is in the works of Desaült. Now the dilators of M. Ducamp are on this principle.

"I usually employ three dilators: the first is three lines in diameter, the second nearly four, and the third four and a half. I make the first and second of the appendix vermiformis of the cæcum, and the third, with a bit of catgut; and, causing them to be prepared by a manufacturer of catgut, I measure them with a compass. Some of them are three lines in diameter at the apex, and there are others which, particularly at the base, are four lines across. I cover a little silver rod, which terminates in a bulb, with a piece of the appendix about twenty lines in length; the sack, formed by the intestines, is tightly drawn over the bulb of the rod, and fastened under it with silk, tied in a double knot. This being done, I pass the rod into a canula of the same metal, eight or nine inches in length, having, at its anterior extremity, a deep groove three lines long, and I fasten the loose end of the appendix to this groove, securely, with waxed silk. (Pl. IV., figs. 1 and 4.) The silver canula has at its other extremity a cap or button, furnished with one turn of a screw. The rod of silver above-mentioned, must project a little beyond this cap, (Pl. IV. fig. 2,) and not fill the cavity of the canula exactly; it should play freely within it, and on pressing the end to which the dilator is attached, the other ought to pass out beyond the cap. Thus, we have an instrument which, for the space of eighteen lines, is not longer than the second size of bougies, when empty, and acquires a diameter of three lines when full. (Pl. IV. fig. 1. and explan).

It is seldom that we can meet with a vermicular appendix four lines in diameter at the apex, though they are frequently of this size at the base. I take a piece of the intestine of this calibre, to make the second dilator; and as this does not terminate in a sack, like that employed for the first, I fasten it strongly with silk, for the space of three lines, to the end of the silver rod. After this, I turn back the piece of appendix upon the ligature just mentioned, and finish the second dilator like the first. The third kind is similarly prepared, but with a piece of catgut four lines and a half in diameter. (Pl. IV. figs. 2 and 3.)

These instruments are to be used as follows:—Mark upon the canula, with a little wax, the distance from the external orifice to the stricture, so that the middle of the sack of the dilator may correspond with the part to be distended, when the mark shall be at the orifice in the glans. The dilator, being moistened and dipped in oil, is to be introduced like a catheter. If the extremity of the dilator meet with any resistance, by which its progress is impeded, it will be immediately perceived by the silver shaft passing out beyond the cap. We must not then press with our fingers, or in any other manner, but withdraw the instrument, and change its direction. I always introduce my dilators without either pressing the rod, or fastening it so that it cannot slip back. I believe this mode of proceeding to be prudent, and I should consider as very reprehensible any other, having for its object the forcible introduction of these instruments. I again repeat it, and I think it cannot be too often reiterated, that the forcible introduction of instruments, in the treatment of strictures in the urethra, can never be other than pernicious.

When the dilator is introduced, I fit, by means of a screw, a syringe (Pl. IV. fig. 6,) furnished with a fawcet to the cap of the dilator, and I press on the piston gently until I meet with some resistance; I then turn the fawcet; the dilator is now distended, and separates the parietes of the strictured portion from three to four lines. In about five minutes, for the first time, and afterwards from ten to fifteen, I open the fawcet, empty the instrument, and withdraw it.

For a long time I distended my dilators with air: I used then to have a good deal of trouble to make the dilatation permanent; for it is very difficult, even with the greatest care, to prevent the air from escaping through some outlet. When this fluid is strongly compressed, it finds its way between the fawcet and the little circular piece of leather which separates them. I have remedied this inconvenience, by filling the instrument in the following manner: I inject air into the dilator until I experience a slight resistance, and turn the fawcet; I fill the syringe, and attaching it to the fawcet, the latter is opened, and the water thrown in upon the air; the latter, strongly compressed by the column of water, becomes condensed; the quantity of air which occupied the whole dilator, no longer fills more than half or one-third of it, the rest being occupied by the water. In this way, a much more powerful distention is produced, and if the dilator should leak, the compressed air would expand, and, supplying the deficiency, keep up the dilatation. Besides, it is then impossible for the air to escape through the fawcet and tent; for between these parts of the instrument and the place occupied by the air, is a column of water which the former cannot pass. In this manner the dilator is distended to its fullest extent, and may be kept in that state for a longer or shorter time. Hence, on opening the fawcet after a quarter of an hour, the air, recovering its natural density, throws to a distance a part of the water contained in the instrument—a proof that the latter was powerfully distended." 123.

The distention produced by this instrument not being permanent, M. Ducamp assists it by what he calls the *bellied bougie*. This is a bougie made with a protuberance or belly, twelve to fifteen lines in extent. He has bougies with bellies of different dimensions, the shaft being in the smallest, as in the largest, only two lines in diameter. The smallest, which he uses immediately after having destroyed the stricture with caustic, has a belly two lines and a half in diameter; the largest has a belly four lines in diameter. The advantages are said to be, 1, their introduction is less difficult and not so painful as that of the other kinds; 2, they distend only the part strictured; 3, they can distend to the degree of four lines, while the others do not dilate it above three lines.

"To resume the course of our treatment: three days after the last application of the nitrate of silver, I introduce a dilator three lines in diameter, inflated with air, and suffer it to remain five minutes; the next day I introduce the same dilator, distended as much as possible with air and water; in about ten minutes, I remove it, and put in its place a bellied bougie, two lines and a half in diameter, which the patient keeps there twenty minutes: the introduction of this bougie is repeated the next day, both morning and evening, and suffered to remain a similar time. The day after, I pass the second dilator, of nearly four lines diameter, and withdrawing it after ten minutes, its place is supplied by a bellied bougie three lines in diameter. This bougie is passed, morning and evening the next day, remaining in, each time, from ten to twenty minutes. A further dilatation is effected the next day with the same dilator; two days after, the third dilator is introduced, having a diameter of four lines and a half, and succeeded by a bellied bougie of three lines and a half. After another interval of two days, I again introduce this dilator, and pass a bellied bougie four lines in diameter, which is repeated morning and evening, remaining a quarter of an hour. In the course of a week, the bougie is only introduced once a day, and retained but for a few minutes: in about four or five days, the patient himself passes it once a day, withdrawing it immediately.* The cicatrix, by this time, has become firmly consolidated, and is four lines in diameter, like the rest of the canal." 130.

Such is M. Ducamp's treatment of ordinary strictures; and it now only remains for us to mention his method in cases of complete retention.

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* "When we have arrived at this stage, it is desirable that the belly of the bougie should not be more than four or five lines in length, (Pl. IV. fig. 8) so that the friction being less considerable, the introduction may be rendered easier."

"I take a fine gum-elastic bougie, and introduce it gently into the urethra; if I succeed in making it pass through the obstacle, I suffer it to remain until a strong inclination to make water is felt, and then withdraw the instrument softly, and the urine rushes through the passage which had been occupied by the instrument, flowing in a stream. When the patient has voided as much urine as possible, I introduce the bougie again, and leave it until a fresh inclination to make water comes on. In the mean while I bleed the patient, and apply twenty or thirty leeches to the anus and perineum, and prescribe a hip-bath, emollient anodyne clysters, rest, and abstinence.

If I cannot pass a bougie I use no force to thrust it in, but remove it. I take an impression of the stricture, and introduce a small bougie by means of a conductor; this bougie is succeeded by one of greater size; when the inclination to make water is very urgent, I withdraw at once both bougie and conductor, and the stream flows. I have recourse afterwards to the above-mentioned antiphlogistic means, and when the inflammation of the canal has been subdued, I commence the radical treatment. This mode of proceeding has always succeeded with me, and I have never adopted any other since I have entertained the ideas suggested in this chapter. If, which is not probable, the bougie should fail to re-establish the course of urine, it will be necessary, after having passed the second bougie, to introduce, through a conductor, a small gum-elastic catheter into the bladder, and draw off the urine in this manner." 133.

Such is the new method of treating stricture proposed, nay employed, by M. Ducamp. We doubt if it will ever find its way into general favour and use. It is too complex, too troublesome, to suit the generality of surgeons. The advantages attributed to it by its inventor may be said, in a general sense, to be two—the speedy and easy destruction and dilatation of the stricture, and the permanency of the cure. With regard to the first, many surgeons will probably think that the ordinary treatment by bougies is, in the main, both simple and efficacious in effecting dilatation. We must say that, from what we have seen and from our own experience, we feel no inclination to abandon the use of the bougie, that is, of our ordinary methods of dilatation; and experience is rather against than for the employment of caustic. If bougies—and when we use this term, we mean the treatment by dilatation generally, employing, according to circumstances, bougies, gum and metallic catheters—if bougies, then, be carefully and dexterously used by a light hand and a practised one, the surgeon is seldom, very seldom foiled, even in cases of the worst description. The treatment by dilatation is more safe, and equally or more speedy than that by caustic, though the latter is now and then extremely serviceable.

But the ground on which M. Ducamp seems mainly to lean, is that of the permanency of the cure by his method. What guarantee have we of that permanency? on what known principle should dilatation, effected by caustic, be thus permanent? We know of none that can warrant the assumption—nay, facts and experience contradict it. We shall not commence a disputation on the subject, as the reasons for our opinion will readily present themselves to the minds and memories of medical men. Our space has been so occupied by placing the propositions of our author before our readers, that really we have none for discussions or arguments. We leave these propositions in the hands of our professional brethren, to believe, disbelieve, put them to the test of experience, or pass them by in silence, as they think most proper.

IV.

REPORTS ON THE EPIDEMIC CHOLERA WHICH HAS RAGED THROUGHOUT HINDOSTAN AND THE PENINSULA OF INDIA, SINCE AUGUST, 1817. Published under the authority of Government. 8vo. pp. 214, with Appendix, pp. 14. Bombay, 1819.

THE present is the Report on the Epidemic Cholera drawn up with the concurrence of the Bombay Government, and published at its expense. It is what is usually known as the Bombay Report, and presents, when conjoined with those from Madras and Bengal, a complete and most valuable history of the epidemic cholera, as it shewed itself in India. Before public attention was earnestly and anxiously directed to every source of information respecting this singular disease, the labours of the Indian Boards were comparatively little regarded. The danger seemed too remote to excite attention or to warrant alarm, and although a few physicians, attracted by curiosity or by partial motives, devoted a slight degree of consideration to the subject, it was never fully investigated even by them. Many bad consequences have ensued from this general professional ignorance, but the effects resulting from the state of imperfect information and semi-knowledge, disseminated by the dabblers in the Indian reports, have been infinitely worse. Statements of false facts have been boldly made, and pertinaciously persisted in; a colouring has been given to other facts and opinions which possessed a real existence; general impressions have gone abroad founded rather on such bases as legendary tales, than sober historic records; and the result has been error, uncertainty, and confusion. It is to clear these mists and dispel these delusions, that we have undertaken to supply a full and analytical account of the several reports to which we have alluded. We trust that when we have accomplished our task we shall cease to hear and read those clashing statements of what was thought and done in India, which now incessantly distract the public. The profession will possess through the medium of this Journal, the means of comparison, the first accurate data on which to found conclusions respecting the similarity or dissimilarity of the cholera in India, Russia, England. It is idle, it is worse than idle, to waste words in disputation. We have had enough, and more than enough, of this and of assertion; we trust that hereafter we shall find a greater semblance of rigorous deductions from acknowledged facts.

The epidemic which is now upon us, which has invaded others before us, and may attack many hereafter, is certainly anomalous in its characters. Yet we do not ourselves see why the inductive mode of reasoning should not be as applicable to this as to any other malady, nor do we yet forego all hope that because the world has been hitherto unsuccessful in the inquiry, it must necessarily remain so. If men will perversely bar their eyes against all light, or admit it only through one green glass of theory, prejudice, credulity, or subserviency to authority, then the prospects for truth are hopeless indeed. But this is not the inductive method, nor any other that we know of, excepting that of the sheep of Panurgus, who jumped into the sea because their leader fell in. If men will cry out, before they so much as gain a glimpse of one patient, that cholera is contagious, or absolutely non-contagious, and, if after seeing it they twist all facts to their preconceived opinions, credulously admitting any thing on one side, obstinately denying every thing upon the other, those men are not calculated to advance science or benefit mankind; they are the remnants of the bigots and persecutors of all ages, the mark of the beast is upon them, they are not philosophers but fools, absolutely and unconditionally fools.

The cry, the stupid cry of contagion, in the sense in which it was employed, and the mode in which it was concocted, would have proved, if successful, a curse to the community, a blight to science, a barrier to truth, and a damning stain upon the century. Fortunately it was as futile as foolish. Our minds are yet left open to the impression of facts, and truth may come, without the certainty of the door being slammed in her face, unless she wear the badge and livery of a creed.

There is no more certain mark of a weak mind than prejudice, of a bad mind than virulent party animosity, of a mind at once malignant and petty than the mixture of both. That mixture of weakness and wickedness has been most apparent in the mode of conducting the discussions on the present epidemic. A party of men, determined from the consideration of a certain sort of evidence, to consider the disease highly contagious, were equally determined to hold up all of a contrary opinion as fools or knaves. These modest bigots wondered at the construction of their opponents' minds, just as an Indian may wonder at the constitution of mechanism, which surpasses the tomahawk or fishing-tackle of his own rude hut. It is indeed astonishing with what tenacity poor and sterile minds will cling to opinions hastily embraced. They seem to be much in the situation of a young couple, who having made a love match against all prudential and rational considerations, adore each other with such fury that nothing short of death can effect their separation. It certainly has been thus with the contagionists, and they and their theory were wedded and bedded, in despite of all prayers for reasonable deliberation and delay.

It is the fashion to consider the present age an intellectual one, and possibly it is so. But in proportion as the many display liberality and a disposition to woo and win true knowledge, to seek her as she should be sought, and to use her as she should be used, the few appear anxious to distinguish themselves by an opposite line of conduct. We know but one mode of arriving at truth, and that is by a careful study of facts, and cautious induction from them. We know but one mode of ascertaining facts or of verifying them, and that is by the employment of the eye of sense under the superintendence of the eye of reason. But in this most intellectual nation of a self-styled intellectual age, such a method of study is unblushingly scouted. Our senses are not to be employed, our opinions are to be bought or borrowed second hand from this or that hebdomadal journal. The evidence on which we are to found the most important conclusions is to be drawn from abroad, nay even from particular sources abroad, and the dicta of others are not to be confirmed or confuted by what we ourselves may see. A set of men, some two or twenty, constituted a body, are to decide on what they have never witnessed, are to lay down the law to those who have the means of judging for themselves, and that law is to be received with more submission than any edict of despotism, is to be viewed as unalterable as the ordinances of the Persians and the Medes. The law being laid down we are thenceforth to become mere passive instruments, automata to move where the wires are pulled. We are not to investigate the phenomena of a malady before us because investigation is a sin, a crime against the majesty of boards, juntas, and journalists. When the disease is in other lands, we are then, and then only, to say what it is, whence it comes, and whither it goes. When it springs up in our own, a change is to come on us. We must hie us from the public places—we must shun all contact with the malady—we must not view it, 'twould be sacrilege; we must not think of it, 'twould be treason; we must not talk of it, 'twould be quackery. We must get us to our closets, and thence we may pen pamphlets or write articles on a disease, which we can only know because we have not seen it. Such has been the impudent and stupid attempt to fetter opinion in this country. That it should miscarry so signally as it has done, was probably not contemplated by those who ventured to essay it. The result might, indeed, have been anticipated by those who can decipher the signs of the times, the impatience of authority not morally just, the prevalence of a spirit of liberality and freedom, mental and political, the diffusion of information, and the enthusiasm of men not chilled by the cold fetters of formal associations. The issue of this very dispute on the contagion of cholera, is to us no mean indication, amidst the many, of the mighty revolution that is yet but begun in the sentiments and manners of men.

To return to our immediate subject. The temper in which we would have men investigate this, as other questions of medical doctrine or medical polity, should be one of strict impartiality. Let them first procure facts, as far as such can be depended on; and where *they* fail, let them not, we implore them, fill up the void with prejudice and party-spirit. Let them not, as too many have done, and the bigoted few yet persist in doing, refuse the evidence of their own senses, and receive in preference the bias of theory and the dictates of authority. We repeat that it is to promote this desirable object, by diffusing genuine information and evidence which may safely be relied on, that we have determined to lay before the public the substance of the reports of the medical boards of Indostan. We shall give it in as terse a manner and concise a form as circumstances will permit.

The Bombay Report is drawn up by Messrs. R. Steuart and B. Phillips. It contains a preface of forty-two pages, embodying the conclusions formed by these gentlemen from the reports presented to them, as well as, we presume, from the evidence of their own senses. The remainder of the work is occupied by forty reports, from surgeons who had charge of detachments or hospitals in which the disease broke out. We shall arrange the prominent features of these individual communications in a tabular manner, as we did, in our last Number, with those published by the Madras Board.

The Bombay reporters commence by an extract from Mr. Jukes' letter, describing the first appearance of the disease. When it shewed itself at Jaulnah, it was pretty clear that it would reach Bombay. Passing over a space of 200 or 220 miles, visiting in its course Aurungabad and Ahmednuggur, it reached Seroor, a distance of 150 miles, on the 18th or 19th of July. Towards the latter end of the same month, it appeared in the city of Poonah, though the troops encamped in the neighbourhood remained healthy for some time afterwards.

"On the 6th of August it broke out with great violence at Panwell, a considerable village on the main line of communication between Poona and Bombay, separated from the latter by an arm of the sea, and distant about 15 or 20 miles; but between which a pretty constant communication is kept up by means of boats. On 9th or 10th of the same month the first case appeared on this Island, and, as appears by Doctor Taylor's report, could be traced to a man who had arrived from Panwell the same day; it is also evident by Mr. Jukes's report, that it spread north and south along the sea-coast from the same place, and that it was imported to a village in the neighbourhood of Tannah on the island of Salsett, distant from this place about 20 miles, by a detachment of troops that escorted a state prisoner to that garrison from Panwell. The disease did not break out at Mahim, on the extremity of this island, distant only 5 or 6 miles from the principal native town of Bombay, until it had been established in the latter: it then gradually spread over the western side of the island of Salsett, through which the road from Bombay to Surat and the northern countries lies, and by which, during the south-west monsoon, is the principal line of communication. By the observation of some individuals, who, aware of the danger of the malady, and with the humane view of relieving the sufferings which it inevitably produced, carefully watched its progress, we are enabled to trace the disease as if creeping along from village to village on that island precisely in the same way, that is, by the arrival of people affected with the disease from places where it was known to prevail; and we are assured that there are some small villages on that island, which from want of this sort of communication, *or from some other cause*, have, after a lapse of four months, hitherto escaped entirely." xi.

The Board conclude that the epidemic cholera differs from all other epidemics, and may be said to stand alone. It prevailed in temperatures varying from 40° Fahr. to 90 or 100, during incessant rain, and that arid state of atmosphere that leaves not a trace of vegetation. The Board also think the disease "capable of being transported from one place to another, as in cases of ordinary infection or contagion, and that it possesses the power of propagating itself by the same means that acknowledged contagions do, subject, however, to *particular* laws, with which we may never become acquainted." This exception rather eats than proves the rule. The Board are "aware of the doubtful nature of the ground on which they tread," and, therefore, mention some facts, with the view, we suppose, of supporting their opinions.

"In October last, when the disease had almost disappeared at Tannah, the attention of Mr. Jukes was called to a case that had appeared in one of the apartments of the barracks of that fort, appropriated to European troops; this, owing to too late application for medical aid, soon terminated fatally; another case occurred a few hours afterwards, the subject of which was saved with much difficulty and danger, and in the course of 6 succeeding days, no less than 9 cases occurred *in the same apartment*. The curiosity of Mr. Jukes was naturally excited, to ascertain under what circumstances so much disease was produced, and on examination, the ward appeared to be both badly ventilated and too much crowded with men, the place was immediately emptied, scoured, and fumigated, *after which no other case occurred.* Since the middle of December, when we had flattered ourselves that the disease was vanishing, as the cold season advanced, the number of cases considerably encreased in this Island, Salsett and the Conkan, and consequently excited much alarm; in some instances these cases have been confined to particular spots, and sometimes to particular houses, where the disease has attacked and destroyed in succession whole families, consisting of three, four, and five persons, while in others only a single case, or at most very few have occurred. We are utterly ignorant of any local circumstances to which such a change can be ascribed, unless by supposing that a diminution of temperature, together with exposure, may have called into action some latent remains of an active poison; otherwise it seems difficult to reconcile those facts with what it is observed in ordinary epidemics.

It will be observed that Mr. Jukes, in his report, remarks that the disease as it first appeared at Tannah, did not go through families when one had become affected; he has since seen sufficient reason to alter his opinion in regard to that particular; and we think that we have observed in several instances, that the disease has shewn a greater tendency to spread, where the first attacks have proceeded in their course to a fatal termination, which they invariably do when not counteracted by medicine. How far the same thing has been observed to happen in other epidemics we cannot determine." xiv.

For a description of the disease and of its symptoms, the reporter quotes the words of a letter from the Bengal Board: these we need not insert here. In that letter the occurrence of consecutive fever is mentioned, but in a manner which is far from applicable to its character in the epidemic cholera of Europe. The Bombay Board, however, distinctly deny its existence on that side of India, and although that denial has been previously alluded to in this Journal, we cannot refrain from explicitly inserting it in this place.

"After the above luminous description, and what will be found in the reports which follow, it appears quite superfluous to enter here into any farther detail of the symptoms of this disease; we shall only therefore mention, that the subsequent fever which it appears has generally accompanied it in Bengal, has been but little if at all observed on this side of India; and as we have before noticed may be owing in a great degree to the more extended influence of those causes which are known to produce the bilious remittent fever as an epidemic in the Bengal provinces than on this side of the Peninsula; for it can scarcely be supposed that a disease, so uniform in its attack and in its course, should, as it were, deviate from itself in any considerable degree, without the agency of some local cause; and we entirely agree in the opinion that it cannot be fairly considered as forming a part of it." xxii.

The Board go on to notice the accurate description of the disease which Sydenham has given us. The logical consequences of this observation were pointed out in our last number, and need not again be insisted on. After noticing the fact of cholera having been described by other authors, and by Dr. James Johnson the latest, and after endeavouring to offer an etymological explanation of the term, *mort-de-chien*, and *mordexim*, the reporters make the following remarks on the question of contagion.

"The exciting and proximate causes of this interesting epidemic, although of the greatest importance to be understood, are like those of most other epidemical diseases, concealed under complete obscurity, '*atra caligine mersæ.*' Great difference of opinion exists among practitioners, as to its contagious or non-contagious influence, and this difference very naturally arises out of the difficulty of the subject; and when we consider the various and opposite opinions entertained by the most experienced practitioners of Europe on the same question, respecting the influenza of 1803, and the divided sentiments which have so long agitated the medical world on the subject of the yellow fever, and even typhus itself, we do not venture at present to decide on so important a point. Several irresistible facts already noticed or related in the following reports and its marked anomaly from all hitherto known simple epidemics, would seem to favor the doctrine of contagion, while the contrary supposition is only supported by a species of negative evidence. This is a question however of the greatest importance and ought not to be too hastily entertained as proved, nor rejected as unfounded; but prosecuted with that diligent enquiry and cautious induction which on every subject of science are so necessary to the attainment of truth; and we entertain a confident hope that the wide range through India, which the disease has taken, will have afforded to some gentlemen more ample means of determining it than we possess." xxx.

The predisposing causes are more obvious, and on this point more unanimity of opinion has prevailed.

"Rapid atmospherical vicissitudes in regard either to temperature or moisture; exposure of the body to currents of cold air, particularly the chill of the evening, after being heated by violent exercise of any kind inducing debility or exhaustion; low marshy situations; insufficient clothing; flatulent and indigestible food, especially crude and watery vegetables, which compose a large proportion of the diet of the natives; and particularly that gradual undermining of the constitution which arises in a condensed, dirty, and ill-fed mass of population, are all unquestionably powerful predisposing causes; and though not necessary to the production of the disease, do, when present, offer a more unlimited range to the operation of the original cause, whatever that may be. Sad experience has however shown that the absence of all those affords no security against the attack; although it appears that a much smaller proportion of the higher orders of society have suffered from it on this side of India, than in the Bengal provinces; *and in this Island, the disease has been confined almost exclusively to that class who are most exposed to the severest labour and privation.*" xxxi.

Here we see a great feature of similarity between the Indian and European epidemic; we allude to its choice of low and paludal localities, and of the poor and the wretched as its victims. When we say that the speculations of the Board on the proximate cause of the disease are unsatisfactory, we accuse them of no more, than all who have ventured to theorize on the subject have been guilty of. They are inclined to think that sometimes the poison acts more immediately on the vascular, sometimes on the nervous system. The Board make no mention whatever of premonitory symptoms, in fact they explicitly state that the first perceptible ones consist in a spasmodic affection of the stomach.

"The most general attack seems to consist in a spasmodic affection of the stomach, duodenum, and more especially the biliary ducts (the total absence of bile in the matter voided upwards or downwards being perhaps the most uniform characteristic of the disease,) which quickly extending through the whole intestinal canal, discharges its contents; for it has often been observed that the purging more resembles the forcible squirting from a syringe, than the operation of a common cathartic. It is more than probable, however, that these are merely the first perceptible symptoms, for it would appear that a great change has already taken place in the circulating system, and that the action of the heart itself has been greatly diminished before they occur. This seems evident from the numerous cases in which neither vomiting nor purging are present, and in which the first appearance of disease is the almost total suspension of the vital functions, immediately followed by severe spasmodic affections of the muscles, and coldness of the extremities. It is said that a diminution of the nervous influence occasions contractions or spasms of the muscles, and it is perhaps equally probable that a diminution of the stimulus of the circulating fluid, and especially of the vital heat which it constantly supplies, may produce the same effect. This, indeed, appears to lay the foundation of the cold stage, and the chain of distressing symptoms that accompany it. There are perhaps few discases attended with such fatal effects, to which the human frame is subjected, of which so little of the first attack has been observed by practitioners; and this may be perhaps easily accounted for by the insidious nature of the attack itself, which is generally unaccompanied with any alarming symptoms, but more particularly when we consider the nature and circumstances of those subjects who have been chiefly presented to our view. They are composed of the poor and labouring classes, who are occupied in obtaining subsistence for the day that is passing, and who, while the excitement which labour and exercise produce remains, may feel but little inconvenience; but the moment that ceases, may speedily become its victims; hence it has been generally observed that the attacks are most frequent in the night." xxxiv.

The Board moot the question, whether the disease is ever ushered in among the natives by a stage of excitement. Dr. Burrell asserts, in his report, that among Europeans it decidedly is so, unless prevented by particular circumstances, as exposure to a draught of cold air.

"As far, too, as we have had opportunities of observing the commencement of the disease in natives (which have been confined chiefly to domestic servants, who, fully aware of its fatal nature, seemed anxious to avail themselves of the remedies which they knew we were ready to administer, and which may have amounted to twenty or thirty cases), after a few watery stools, or pain in the bowels, sometimes accompanied with vomiting, we could distinctly perceive a preternatural heat of the skin, with a small, quick and thready pulse, laborious breathing, and in some attended with such a change of features and countenance as to render them with difficulty recognizable by their employers. In such cases, if medicine be not immediately exhibited, it is equally certain that the disease, in a few hours, assumes all the worst forms that have been described, namely, coldness, sinking of the pulse, spasms, and death. It must, however, be acknowledged, that this stage of excitement is by no means so distinctly unfolded among the natives as among Europeans, and this may depend upon constitutional causes." xxxvi.

The Board here draw attention to the description of congestive typhus given by the late Dr. Armstrong, and observe, that those who are most intimate with the various forms of the attack of cholera, will be struck with the similarity of the two diseases *at their first appearance*, while experience has proved that they are best met by the same remedies.

Lastly, the Board advert to the subject of treatment. On this we may be brief. Blood-letting they consider the sheet anchor *in Europeans*. Now we know that the great majority of Europeans in India are persons in the prime of life, troops, for instance, and in comparative vigour. On the contrary, we have the authority of the Board for the fact, that those attacked among the natives were, in Bengal, as here, the poor, squalid, and debilitated. With them blood-letting lost its powers, by the same rule and for the same reason, that blood-letting was found even mischievous amidst the half-starved Irish in Southwark. Next to blood-letting the Board rank calomel, which often preserved life when the former could not be put in practice. When the disease was met on its first attack, a single scruple dose of calomel, with 60 minims of laudanum, and an ounce of castor oil seven or eight hours afterwards, was in many cases sufficient to complete the cure. Other means are auxiliaries, but as such are useful, particularly the warm bath and stimulating frictions.

"In a disease, therefore, in which we have every reason to believe that venous congestion has taken place to a great extent, we conclude that the liver, from its peculiar circulation and structure, is more immediately liable to become seriously and permanently injured, it should not be omitted. We have before mentioned that Dr. James Johnson, of the Royal Navy, seems to have been the first to have pointed out the best method of cure; since most of the foregoing remarks were written, we have seen the second edition of that gentleman's valuable work, in which we find a strong corroborative testimony to the utility of blood-letting in this disease, or one somewhat similar to it, on the coast of Brazil, by Mr. Sheppard of Witney, without the assistance of any other remedy. The public are greatly indebted to Mr. Corbyn, of the Bengal Establishment, for his clear and comprehensive letter on this subject at a time when the disease was producing the most dreadful ravages: the early communication of his practice has been the means of saving thousands of lives in situations where Dr. Johnson's work might not be known." xlii.

The Board, in conclusion, are of opinion, that whatever other name be given to the disease, that of cholera should be discontinued. They agree with Sydenham in thinking, that from common cholera, both the disease they report on and that he described, are, *toto cœlo,* of a different nature. " Quisquis autem cholera morbi legitimi phænomena studiosè collegerit, fatebitur, morbum istum, quamvis eorundem symptomatum nonnullis stipatum, ab hoc nostro toto cœlo distare." Here is another dilemma in which the high cholera party are placed. They say that the present is an exclusively new disease, unlike that of Sydenham, who merely delineated common cholera. Yet Sydenham himself, no mean authority, like the Pythagorean, haud sordidus auctor naturæ verique, repudiates this dictum; and declares that what he saw was *not* common cholera. Sydenham, then describes a peculiar disease—the Indian Boards affirm that it is identical with the Indian cholera—the high cholera party assert that the Indian cholera is identical with our own epidemic—and yet they deny that our own epidemic is analogous with that described by Sydenham. This is merely one of the many and great inconsistencies of reasoning and argument into which certain persons have plunged themselves, by their breathless haste to prove the present epidemic a totally new and a most pestilential malady.

Here the general summary of the Board is terminated, and the individual reports, upon which it is chiefly founded, begin. These, as we said before, are forty in number. We shall throw the chief particulars into the form of a table, resembling that which we gave in our analysis of the Madras Report. Any features of particular interest or importance, will be mentioned in a succinct manner at the conclusion of the tabular statement.

TABULAR ANALYSIS of the INDIVIDUAL REPORTS transmitted to the BOMBAY PRESIDENCY.

Name of Medical Officer.	*Premonitory Diarrhœa.*	*General Symptoms.*	*Consecutive Fever.*	*Contagious or not?*
1. Assist. S. Robt. Wallace. *Seroor, July,* 1818.	none	purging, succeeded by vomiting, cramps—patients commonly cold in an hour. No blueness mentioned	none mentioned	no opinion given
2. Dr. W. G. Burrell. *Seroor, July,* 1818.	none	at first languor, pyrexia in Europeans;—then vomiting & purging—cramps—sudden collapse	none mentioned	"cautious in reporting not infectious;" hospital attendants had it
3. Assist. Surgeon Richards. *Punderpoor, July,* 1818.	none	spasms sometimes produced lock-jaw	none mentioned	no opinion
4. Assist. S. Whyte, *Seroor, July,* 1818.	Watery purging from half-hour to 5 or 6.	usual symptoms.	whenever heat restored, out of danger. In a few, great heat afterwards, with bilious vomiting and purging	not contagious
5. Assist. S. Daw. *Aurimgabad, July,* 1818.	none	sudden onset of usual symptoms—yellow eyes and sallow skin	none mentioned	"does not think it infectious—endemic best appellation"
6. Mr. Craw. *Seroor July,* 1818.	none	lays great stress on spasm, and considers it in many Europeans a true tetanus	none mentioned	doubtful
7. Assist. Surgeon Campbell. *Seroor.*	none	in Europeans pyrectic symptoms, followed by vomiting and purging	"not so soon convalescent as had been represented"	no opinion
8. As. Surg. Tod. *Chumargoodee, Aug.* 1818.	none	disease peculiarly sudden—violent pain in bowels and extremities	none mentioned	no opinion
9. As. S. Milward. *Ahmednuggur. Aug.* 1818.	none mentioned	nothing particular	none mentioned	ditto

Name of Medical Officer.	*Premonitory Diarrhœa.*	*General Symptoms.*	*Consecutive Fever.*	*Contagious or not?*
10. Ass. S. Moyle. *Aug.* 1818.	none mentioned	thinks disease intimately connected with tetanus	none mentioned	no opinion
11. Dr. Milne. *Poona, Aug.* 1818.	none mentioned.	———	———	ditto
12. Assist. Surg. Wallace, *(iterùm.)* *Seroor, Aug.* 1818.	none mentioned	———	———	ditto
13. Assist. Surgeon Richards, *(iterùm.)* *Punderpoor, Aug.* 1818.	none mentioned	———	———	ditto
14. Assist. Surgeon White, *(iterùm.)* *Seroor, Aug.* 1818.	none mentioned	often begins by severe pain of abdomen—cramps of lower extremities—sometimes by sudden giddiness and confusion.	none mentioned	ditto
15. Dr. Burrell, *(iterùm.)* *Seroor, Aug.* 1818.	none mentioned	cases of chronic dysentery aggravated during the epidemic—relapses not unfrequent	none mentioned	ditto
16. Assist. Surg. White, *(iterùm.)* *Seroor, Aug.* 1818.	none mentioned	———	———	ditto
17. Mr. Longdill. *Deccan.*	none mentioned	fatal when no pulse at wrist	———	ditto
18. Mr. Gordon. *Satara, August.*	none mentioned	thinks brain affected before stomach and bowels—many became giddy in fields, fell, and died in a few minutes—jaw locked for a time in two cases	none mentioned	ditto
19. Mr. Wallace, *(iterùm.)* *Seroor, August.*	none mentioned	———	none mentioned	ditto
20. Mr. Wallace, *(iterùm.)*	" disease ushered in by purging"	———	———	gives many strong facts against contagion
21. Mr. Robertson, *Keerky, August.*	none mentioned	very various—parts previously weakened generally much affected.	none mentioned	not contagious

Names of Medical Officers.	*Premonitory Diarrhœa.*	*General Symptoms.*	*Consecutive Fever.*	*Contagious or not?*
22. Mr. Gordon, *(iterùm.)* *Satara, September*	none mentioned	———	———	———
23. Assist. Surg. Henderson. *Kurrar, August.*	primary symptoms vary.—Generally watery stools first symptom.	hiccup in one fatal case	———	———
24. Assist. Surg. Whyte, *(iterùm.)*	none mentioned	———	———	decidedly not
25. Assist. Surg. Henderson, *(iter.)*	none ditto	———	———	not
26. Mr. Surgeon Craw, *(iterùm.)* *Seroor, Aug.*	none ditto	———	———	———
27. Capt. Sykes, *Punderpoor, Aug.* (Very inconsequential letter.)	in some cases diarrhœa at first.	———	———	contagious
28. Mr. Whyte, *(iterùm.)* *Seroor, Aug.*	none mentioned	in bad cases no remedy beneficial in August purging first symptom—vomiting in from 2 to 8 hours	———	not contagious
29. Assist. Surg. Anderson. *Poonah, Aug.*	none mentioned	great variation	none mentioned	"contagion scarcely merits notice"
30. Mr. Surgeon Coats.	none	varieties	feverish re-action in every case that did well	"infectious under some very limited peculiarity of constitution"
31. Mr. Surgeon Jukes.	none	pulse extremely various—sometimes headaches and giddiness;—lock-jaw in one instance for some time.	none	not contagious, but very unlike common epidemic
32. Dr. Taylor.	none	three different forms—1st, commences with slight pain in abdomen—2d, to this prostration rapidly succeeds—3d, patients fall down suddenly: very poorest classes suffered	none	seems to think it contagious, but says that only 3 out of 44 native assistants had it

Names of Medical Officers.	*Premonitory Diarrhœa.*	*General Symptoms.*	*Consecutive Fever.*	*Contagious or not?*
33. G. Olvey, Esq.	none	———	none	no decided opinion—no hospital attendants attacked
34. P. Corbyn. *Centre Division, Grand Army.*	none	usual symptoms	none	"perfectly convinced it is not infectious."—No hospital attendants affected

This concludes our tabular analysis of the individual reports. It will be seen on attentively referring to it, that although the reports are forty in number, the reporters are not so numerous, some gentlemen having forwarded to the central board, so many as two, three, or even more communications. Of the 22 reporters 10 give no opinion on the contagiousness or non-contagiousness of the disease. Now of those who give no opinion it is probable that the majority were non-contagionists, for this reason—that the contagionists were vastly in the minority throughout India, and they who entertain a general opinion are less likely to state it explicitly, than those who have found reasons for espousing peculiar and less commonly-received notions. Mr. Anderson, for instance, remarks that, "the idea of its (the cholera's) contagious nature is entertained by *so few*, and with so little reason, that it scarce merits notice."*

To pursue our comparison. Four are doubtful; one of the quartett, Dr. Taylor, appearing to incline against contagion, as he observes that none of the hospital attendants were attacked; whilst another, Dr. Burrell, leaning perhaps a little the other way, as he says he would be cautious in reporting the disease not infectious. Three are contagionists. Of these, one is non-professional, indeed unprofessional, namely, Captain Sykes. This gentleman, in answer to the observation that hospital attendants generally escaped, replies that he is convinced he would have had the disease, if he had not taken remedies to prevent it! He also feels certain that it could be proved to have been imported into every village, if persons were to set about it. This latter is a very judicious conclusion, and must have been dictated by a spirit, not altogether unprophetic. We know that, give a high-cholerist rope, and send him to Paris, he would prove to demonstration that the cook of Marshal Lobau was infected by M. Magendie, or the mate of a Calais steamer, who coming from Dover or the Thames, must, of course, have a pocket-full of cholera, to be disseminated from the said pouch or pocket throughout the circle of his acquaintance, or of all so unfortunate as to set foot upon his vessel.

To return. Ten are decidedly non-contagionists. The list then stands thus—no opinion, 10—doubtful, 4—contagionists, 3—non-contagionists, 10; 3 contagionists, in short, out of 22.

With respect to the premonitory diarrhœa, and the consecutive fever, the table speaks for itself, and settles the question of *perfect identity* between cholera in England and cholera in Bombay. Yet what signify facts? We have no doubt, whatever, that persons will be found to persist in swearing to that identity, by asserting that diarrhœa and fever, as general rules, are no novel features; nay, more, that the Indian Reports will prove it.

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* Report, p. 141.

Having disposed of these gentlemen thus, we redeem our promise of extracting a few of the more interesting circumstances from their reports. And first, of the mortality in Bombay. The following list comprises the amount of cases, of deaths under treatment, and of those ascertained by the police, where no treatment would seem to have been resorted to. The latter are probably below the actual numbers, and one-third or one-fourth may be added to them. The population of Bombay may amount to between 200 and 220 thousand, say 210,000. The number of ascertained cases 15,945, or 7½ per cent.

"ABSTRACT OF CASES.

1818.	Cases.	Deaths.	Police.
August	4400	256	409
September	4804	287	478
October	2411	146	181
November	824	44	29
December	806	64	72
1819.			
January	889	114	125
February	517	27	
	14651	938	1294

Proportion of deaths in those cases where medicine was administered, 6.4 per cent."

The latter statement evinces the disproportion between the mortality of India and Europe. The following extract from the report of Mr. Whyte will display the influence of locality and of temperature, as well as the obscure connexion between the prevalence of cholera and fever.

> "The Cholera Morbus made its first appearance here in the lines of the foot artillery, and attacked in succession every other corps, except the 4th light cavalry and 22d dragoons, which from situation or some other cause have hitherto escaped. I am the more inclined to think, that these corps owe their exemption to locality, from the following circumstance.—The Madras dooly bearers were encamped at the W. end of cantonment hill, between it and the nulla which separates the cavalry from the infantry lines; and while in that situation, several were attacked by the disease, and three or four died. At the request of the Assistant Surgeon of the 22d dragoons, whose duty it was to attend them, they were removed to a situation near the lines of that corps, that he might be at hand to afford them the most speedy aid; and since their removal, I understand no fresh cases of cholera have occurred. Since the epidemic showed itself here, the days have been exceedingly close and sultry, and about sunset a piercing cold wind has set in from the S. W.: this wind blows down the channel of the nulla mentioned above, turns the corner of cantonment hill, and blows over the cantonments. From want of a thermometer, I could not judge accurately of the degree of heat; but from my sensations, I think its range must have been extensive. The class of people which has principally suffered from this disease, is composed of the poor, badly clothed, or

fed, and those of a debilitated constitution; or else of men, in whom the perspiratory process has been highly excited during the day, whether by violent exercise or exposure to the sun; and in this way sometimes the stoutest and healthiest men suffer. While this disease bears all the characters of an epidemic, undoubtedly depending upon some peculiar and unknown properties in the atmosphere, it appears to be more readily caused by currents of that atmosphere blowing from particular quarters; and what is of great practical importance, a situation sheltered from these currents, a situation for example, in the lee of a hill, is particularly free from the influence of this epidemic. It appears to me that, in some constitutions, this cold wind, instead of producing Cholera, causes a regular attack of ague and fever. You will observe by the abstract of the 7th, that 18 cases of fever were admitted last week, although the period of their admission was not the springs, when that disease commonly shews itself: in few of these men did more than one fit occur. The above impression was made stronger on my mind, from what took place in my own person. After all my perspiratory pores had been kept open some time, in a crowded hospital, on going across the parade, I was suddenly seized with a cold shivering and trembling fit, which lasted some time after my return home. All my thoughts were fixed on Cholera. By means of the pediluvium and mulled port wine, however, I restored warmth and comfortable feelings, but suffered a smart febrile attack after going to bed, which kept me hot and restless during the night; but from which I, in the morning, arose free though languid. I think, that had my constitution been so predisposed, the same cause which produced fever, would have brought on cholera morbus." 13.

The same gentleman offers us an instance of that rather rara avis, a spontaneous cure, or something like it.

"I at first thought, that in a disease of so much violence, there was no such thing as a spontaneous cure; but a man who had been affected three days, was brought to the hospital this morning, in whom the spasms had almost entirely gone off, and whose pulse could be felt at the wrist, although from the description he must have sustained a violent attack, and he had taken no medicine." 20.

Mr. Daw relates a curious instance of the escape of one body of men, probably from prudential conduct, whilst another body, less cautious, suffered severely.

"Two bodies of men, one of nearly three hundred, and the other about one hundred (this is very nearly the numbers but not exact) were in adjoining situations, when the disease broke out in the place where these troops were. The 100 men immediately determined, that, by great temperance and care, and by not exposing themselves unnecessarily, and in particular by avoiding the night air, to endeavour to escape the disease. It succeeded so well that only one man had an attack of it; while the other body of men, the 300 who took no such precaution, lost one-tenth of their whole number. You may think from the manner in which I have written this, that I have no distinct information as to numbers; but had I time, I could easily procure the exact statement, which I am quite certain would very nearly agree with what I have said from memory." 31.

Such has been the capriciousness of cholera that one or two instances of this kind are worth little, at least as foundations for reasoning. During the prevalence of cholera over the small island of Salsett, some villages escaped. Two months after the disease had disappeared from the island, it broke out in one of those same villages, and destroyed 23 out of a population of 80. Had quarantine been adopted in the first instance, to it the original escape, and to its infraction the subsequent desolation would no doubt have been attributed with some plausibility by the post-hoc-ergo reasoners.

Mr. Wallace, in his report, notices the general prevalence either of febrile symptoms, or bowel-complaint among all persons, during the existence of cholera. How much this has been the case in London, those who have any practice can testify. In this country some practitioners have been astonished by comparatively sudden deaths of patients apparently convalescent. Several such cases are mentioned in these reports. Two such examples, but not strong ones, are given by Mr. Whyte.

> " The European lived three days or more from the attack of the disease; warmth, a natural pulse, perspiration, and yellow-coloured stools, had returned; but a degree of coma came on, for which he was bled; and I believe he died about the third day, coldness having re-appeared. The sepoy was attacked at day-light, admitted at 11 o'clock, and died at 4 the following evening. I saw him a few hours before death, and could just perceive his pulse; vomiting was completely suppressed, and purging nearly so, although tenesmus urged him to remain almost continually upon the stool. However, I thought him in a fair way to recover, and was astonished a few hours after to receive a report of his death." 65.

The following circumstances strongly militating against contagion, are related by the same gentleman.

> " Convinced, as I am, of the total absence of contagion in this disease, I have observed the late revival in some measure of this opinion with some degree of pain. Surely, if it was at all contagious, the fact of its being so could not long remain doubtful. In the general hospital here, there were three sepoys, who resided continually from the first appearance of the epidemic, inhaling at every inspiration by day and night, mouthfuls of infection. If the atmosphere was really loaded with contagious effluvia, arising from the bodies of the numerous inhabitants of the hospital, the escape of these men (which has been complete) would be miraculous indeed, living as they were in the very midst of these effluvia, and so near their source. Allowing that the constant habit of doing so procured them an exemption from the influence of this contagion, the same thing cannot be said of the friends and relations who were attending upon the patients, nor of six dooly bearers, changed daily, and who used to assist the sick into and out the bath, and in every other way; thereby exposed to be infected with the disease, whether it is conveyed through the medium of the atmosphere, or by touch: and yet I have not known one instance of dooly bearers, friends, and attendants of the sick being so infected; nor have any of our hallalchores, or hospital assistants suffered. One of our correspondents supposes, that the disease has travelled in a direct route at the easy rate of 15 miles a day, and *believes, if it could be proved,* that it has not shewn itself in any village, that had remained insulated or unconnected with other villages, where the disease was. Until this *is proved,* it is quite as easy to believe the contrary. In the mean time, we have seen it affecting a particular part in one cantonment for days, without reaching another part, although a constant communication was kept up between these parts all the while." 105.

But we dare not proceed farther. With respect to the treatment, we can only say that, on the whole, the testimony of the reporters greatly preponderates in favour of bleeding and calomel. On the other items it is unnecessary for us to say any thing at present. It is singular that throughout these reports no mention is made of blueness, that favourite colour of the cholerics of Europe. Here we conclude the Bombay Report. It was drawn up suddenly after the irruption of the epidemic, and is much more incomplete than either of the other two reports from Bengal and Madras. Nevertheless it is worthy of record, and we give it a place for the purpose of future reference, when the original document will not be procurable.

V.

REPORT ON THE EPIDEMIC CHOLERA MORBUS, AS IT VISITED THE TERRITORIES SUBJECT TO THE PRESIDENCY OF BENGAL, IN THE YEARS 1817, 1818, AND 1819. Drawn up by Order of the Government, under the Superintendence of the Medical Board. By *James Jameson*, Assist. Surgeon and Secretary to the Board. Octavo, pp. 325. Calcutta, 1820.

THE epidemic cholera made its first appearance in the division of our Indian possessions subject to the presidency of Bengal. But the Bengal Board were not the first to report upon the malady; on the contrary, the Medical Board of Bombay published their Report in the year 1818, whilst the present was deferred until 1820. This circumstance is important, as it serves to explain some inaccuracies and errors into which ourselves and others have fallen. On the strength of one statement, for instance, the Bombay Board asserted that the epidemic broke out first in Zilla Jessore, and radiated from thence to all parts of India. The Editor of this Journal was the first in this country to receive the Bombay Report from the hands of Dr. Steuart, who had drawn it up. He published all the statements it contained as authentic, and, thus disseminated, they have subsequently been copied into every work upon the subject, and adopted as the basis of medical reasoning. We shall presently see, how erroneous the common opinion on the origin of the disease has been proved by careful and accurate investigations.

The method adopted by the Bengal Board to procure information respecting the epidemic was this. A circular, specifying the points on which replies were desirable, was forwarded to all the individuals on the list of the Medical Department. Queries embracing the main topics of interest and importance—atmospheric influence and conditions, contagion, endemic influence, the time and mode of appearance of the disease at any place, its rise, progress, and decline, its mortality, its pathological characters, its treatment, its sequelæ, and so on, were specifically addressed to two hundred and thirty-eight individuals. One hundred and twenty-four only sent replies at all, a circumstance calculated to elicit, in our opinion, equal regret, surprise, and dissatisfaction from all who have the good of their fellowmen or the interests of the profession itself at heart. Why men should superciliously hold their tongues on such an occasion, we cannot so much as conceive; but let that pass. Twenty-four answered merely to state their inability, in any way, to assist the Board, in the proposed enquiry. In this perhaps many were right. The remaining hundred communicated much valuable information, the whole of which has been embodied in, and indeed has formed the Report of the Board. We should state here, that this differs from the reports of the Bombay and Madras Boards in one great respect. In the *latter* the individual reports, or copious extracts from them, are given in detail, and are merely preceded by a summary of the evidence on the part of the Board. In this (the Bengal) we have no individual reports, but the statements of all have been consolidated and fused into a systematic and consistent treatise. Each plan presents its advantages, and on the whole we are well satisfied that both have been adopted. The method that has been pursued is delineated in the following short quotation.

> "It was therefore determined to abandon this method; and in its stead, to adopt the form of a digest or compendium of all the facts within reach. In doing this, the mode of describing diseases, usually adhered to by practical writers, has been followed, with as little deviation as possible; that is, the symptoms have been treated of first; then the causes, proximate, remote, predisposing and exciting; then the mortality caused by the disease; then some peculiarities observed by it; and lastly the method of cure. To the whole have been prefixed an introduction describing the rise and progress of the Epidemic; and a sketch of the Weather in Bengal, and in the Upper Provinces, during several years antecedent to its appearance.—*Pref.* x.

Mr. Jameson quotes many passages from ancient writers to prove that all the symptoms of the disease have been enumerated in former times. In our analysis of the Madras Report, and in our observations on the epidemic in the last number of this Journal, we have touched so freely on this subject, that we need not revert to it. It must require a vast amount of credulity or incredulity to assert or to imagine now, that the epidemic presents any new, undescribed, or pathognomonic symptoms by which it may be known from other described visitations of cholera. The man who could make such an assertion must be very ignorant, very obstinate, or very impudent. Nay, not only has the disease been delineated in all its essential characters and conditions, but no doubt can exist of its having raged as an EPIDEMIC in India, if not elsewhere. Thus, in the Spring of 1781, an epidemic malady, characterized by dreadful spasms of the extremities and trunk, with distressing vomiting and purging, laid hold of a detachment five thousand strong, under Colonel Pearse, in the Northern Circars. Men dropped down by dozens, and even those less severely affected were generally dead or past recovery in less than an hour. Death raged in the camp, the road was strewed with the dying and the dead, and not less than seven hundred men were cut off. The mode of attack, the persons attacked, and the progress of the attack were precisely similar to what has been latterly observed during the present epidemic. But the disease did not cease after disabling Colonel Pearse's detachment. It passed southward, reached Calcutta, occasioned for a fortnight a very great mortality, then passed northward, and, owing to the imperfection of the documents preserved, its course can be traced no longer. The disease then has undoubtedly existed, nay, has been described as an epidemic. Then in what does the epidemic cholera before us and upon us differ from former recorded visitations? Simply in this, that its sphere has been more extended, its influence more deadly, its might more irresistible, than we have known them heretofore. We have no symptom, no cadaveric characters, no general nor partial laws, no phenomena about it or within it, which can enable us to say that it is a new disease, a malady which had never previously been witnessed, experienced, or described. To deny this is to deny undisputed facts and fly in the face of all philosophic reasoning —it is to make assertion superior to proof—to prefer dogmatic prejudice to authentic records. On the part of those who know no better, this is folly; in those who have the means of reference and consultation, it is worse, it is delusion, wilful delusion.

This introduction to the Report occupies, with the preface which we have been considering, 68 pages. The former is chiefly occupied with remarks on the condition of the seasons in Bengal, previous to the eruption of the epidemic. It appears that great and unusual atmospheric vicissitudes, or rather alterations, had commenced, and that they continued till after the epidemic had made some progress. For a description of the unnatural character of the seasons, we must refer such of our readers as are curious on the matter, to the Report; it is enough for our present purpose that such was the case. As might be expected, the human constitution, as well as the thermometer, felt the changes. Throughout 1816, low fevers predominated, and Indostan was visited by the infectious malignant sore throat, a disease previously known there only by name. In the upper Provinces, bilious remittent fever raged epidemically, and occasioned such mortality, as surpassed "any thing on record in the medical annals of Bengal." The military stations wore a gloom hardly to be imagined—the visits of families were almost put a stop to, and the few that were made were those of condolence for departed relatives and friends—in many Native villages, the whole population was ill, and shops were shut for want of people to attend them—the banks of the rivers were at all times covered with the dying and the dead—in Cutch and in Sindh, several cities were said to be so depopulated, that the living were unable to bury the dead, a circumstance that even De Foe denies to have occurred in the great plague in London—and throughout upper Indostan, the horned cattle were so sickly, that their bodies could be seen strewed in vast numbers in the pastures by passing travellers. Such was the state of public health in India in 1816. The cholera had not yet appeared. The previous seasons had been most unnatural, and we presume had been most unwholesome; at all events, man and cattle died, and Native and European were smitten with the epidemic maladies.

> Hic quondam morbo cœli miseranda coorta est
> Tempestas, totoque Autumni incanduit aestu,
> Et genus omne neci pecudum dedit, omne ferarum,
> Corrupitque lacus, infecit pabula tabo.

The cold season of 1816-17, brought, not health and pleasure, azure skies, elasticity and vigour to animal nature, freshness and verdure to the plant of the garden and grass of the plain. It brought not these its natural gifts, but mist and fog and sultry winds, the appurtenances of an Indian Autumn, not a Winter. Now, however, European and Native were healthy, there was a sort of pause, a breathing time between the pestilential fever that had just been, and the mightier pestilence that was about to be. February, March, April of 1817 presented "singular deviations" from their ordinary course—the rains set in twenty days earlier than usual, on the 25th of May—this month, with June, July, August, were extraordinarily wet, "an immense quantity" of rain falling, the river being quite full, the country generally under water, and the previous comparative healthiness giving way to fever, hepatitis, flux, and acute rheumatism. In August the Natives for the first time began to suffer severely from the epidemic cholera. The consideration of the seasons is pursued with patience and ability by Mr. Jameson as far as the month of May, 1819. We may state generally that the variations to which we have already referred, and for a more particular and precise knowledge of which we must direct those who wish for it to the original Report, continued until the latter month, when southerly winds and settled weather set in, and the cholera withdrew from Bengal. It is singular that on two occasions, in February 1818 and in April 1819, sudden changes of temperature appeared to revive the epidemic which had previously been dormant and declining.

> "This sketch of the weather being now brought to a conclusion, some apology may be necessary for its prolixity and minuteness of detail.—It might, indeed, have been wished, to make it less dry and tedious.—But it was only by entering largely into particulars, and by minutely following the successive variations of each period, and thus affording the reader an opportunity of comparing them with the fluctuations in the healthiness of those periods, that we could hope to trace a connexion between the generation of the prevailing pestilence, and the preceding irregularities in the season. How far this has been successfully done, must be left to the reader's judgment, when he shall have perused the account of the rise of the epidemic now about to be given.—This, at least, he will not doubt, that there was a remarkable coincidence between the extraordinary irregularities manifested throughout India in 1816 and 1817, and the rise of the epidemic; and that its subsequent abatements and revivals, were in some measure dependent on corresponding vicissitudes in the state of the weather." lxviii.

We have thought it necessary to devote some little attention to the atmospheric constitution of India, or at least of Bengal, prior to the out-break of the epidemic. It is undoubtedly true that, since its establishment, the latter has in some degree defied all seasons and conquered all climates. But it is no less consistent with experience and with common sense, that circumstances may exert great power in exciting a disease, which, when it is in being, exert but a feeble influence upon it. Thus cold applied to the surface of the body will excite pneumonia, but this being induced the removal of the cold is not followed by a removal of its original consequence. The difference between the cases is this, that in the former we have a general disposition to disease created, in the latter an insulated malady. Whether the irregularity of the seasons was the cause of the epidemic cholera, or whether it was not, it is certain and indisputable that irregularity did prevail to a very unusual extent, that epidemic fevers of a grave description occurred in the latter part of 1816, that the unnatural character of the seasons continued, and that in 1817 the epidemic made its appearance. These are facts, let men found what doctrines upon them fancy or reason may dictate. We proceed to the section on the rise and progress of the disease.

Cholera morbus has prevailed more or less endemically during the hot and rainy seasons of every successive year, in the lower Provinces of Hindostan. But previously to 1817, its influence was limited, and its sphere circumscribed. During the first six months of 1817 it shewed itself sooner, and was more common than in former years. In Nuddea and other districts, it would seem to have occurred in an unusual degree in May and June. On the 28th of August, it was reported to the Government that the disease had suddenly appeared epidemically in Jessore, a populous town situated in the centre of the delta of the Ganges, that it was committing extraordinary ravages, and that its inhabitants were flying in crowds from the place.

" So little was the nature of the new pestilence yet understood; and such was the extreme consternation produced by it, that the Civil Courts of the District were shut; and a stop put for a time to business of every description. Although the general emigration which took place from the city, would seem to have had a decidedly beneficial effect on the state of its health, by diminishing that density of population, which has been since invariably found to be a powerful auxiliary to the Epidemic; yet such was the energy of the disease in this its first onset, and so fatally destructive was it of human life, that in this district alone, it is reported to have, within the space of a few weeks, cut off more than six thousand of the inhabitants.

It is necessary to be thus particular regarding the breaking out of the disorder at Jessore; because from the alarming nature of the circumstances, which attended its appearance in that quarter; connected with its rapid and general spread as an Epidemic over almost every portion of the Lower Provinces, accompanying or immediately following that appearance; an idea then arose, and has since obtained very general belief, that Jessore was the place, in which the disease primarily originated, and whence, as from a focus, its pestilential virus, of whatever nature, emanated, to the surrounding districts. What served to give validity to this conjecture, was an opinion then entertained, and since industriously propagated, that the *fomes*, or specific poison producing the disease, had its rise, not in any vitiated state of the atmosphere, or other cause of general operation, but in circumstances of a purely local nature: such as the use of rancid fish and blighted grain.

It is nevertheless certain, that nothing could be more erroneous than this notion of the local origin of the Epidemic. For, not to speak of its frequent occurrence, so early as May in some parts of Nuddea, and other districts already adverted to, it is quite clear from the statements of the medical staff, written separately and without interchange of knowledge or communication, that, more than a month previously to Jessore's becoming affected, the disease had begun to prevail epidemically in the distant Provinces of Behar and Dacca; and that before the expiration of the first week in August, it had firmly established itself in many other parts of Bengal. Thus it is distinctly stated to have broken out in the City of Patna on the 11th of July; to have spread to the contiguous station of Dinapore, and the adjacent villages early in August; and to have remained without intermission in that neighbourhood, until the end of January following.* In like manner, after having in July appeared at Sunergong, a Town on the banks of a branch of the great river Megna, it thence proceeded, visiting the *ghauts* or public ferries and grain markets in its way, to Nuraingunge and Dacca, where it arrived in the beginning of August. During the whole of July and August, eight out of eighteen Police Departments into which zila Kishnagur or Nuddeea, on the east side of the Hoogly, is divided, were also fully subject to its influence; and it had about the middle of the latter month even found its way to the remote Province of Sylhet, which is separated from the eastern parts of

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* " It appears from accounts received since this sketch was drawn up, that the disease had ravaged Nuseerabad, a town in Momensing, in June; and had even largely affected the South Eastern Division of that district, in the early part of the month or last days of May: following the course of the Burumpooter; and irregularly attacking the villages on its banks."

Bengal Proper by the great Rivers Ganges and Burumpooter. On the 23d of August we find it raging at Chittagong, far round the Eastern corner of the Bay of Bengal; at the same moment in Rajshahy, a centrical district lying East of the Ganges; and not a week afterwards, in the high and distant tracts of Bhaugulpore and Monghyr. The exact date of its appearance in Calcutta has not been ascertained.—But there is little doubt, that it visited some spots of the town and suburbs as early as the beginning of August; that it daily gained ground, and before the end of the month had widely spread its ravages, in a manner threatening to sweep off a large portion of the native population; and that in the early part of September, even the European portion of the community was no longer secure from the concentrated activity of the poison.

These facts are more than sufficient to shew the fallacy of every theory, which attempts to derive the disease from any local source; or to trace it to any one particular spot, as the centre from which it was emitted to the surrounding countries.—They prove, without the possibility of dispute, that it broke out at very remote places at one and the same time, or at the distance of such short intervals, as to establish the impossibility of the pestilential virus being, in this stage of its progress, propagated by contagion, or any of the other known modes of successive production; and that its general diffusion was therefore referable to some cause of more universal operation.*

Soon after the middle of September, the disease, now strictly epidemical, extended itself in every direction; within the short space of a few weeks stretching from the most easterly parts of Poorneea, Dinagepore, and Sylhet, to the extreme borders of Balasore and Cuttack; and reaching from the mouths of the Ganges nearly as high as its junction with the Jumna.

Within the area of several thousand miles, thus in so short a period brought under its influence, few towns or villages of any considerable size wholly escaped its attacks; almost every spot being, notwithstanding the great irregularity of its course, and waywardness of its approach, sooner or later, and in a greater or less degree, subjected to its dreadful visitations.—The cities of Dacca and Patna, the towns of Balasore, Burrisaul, Burdwan, Rungpore, Malda, Bhaugulpore, Chupra, and Moozufferpore, with the Military stations of Monghyr, Buxar, and Ghazeepore, all suffered severely: and throughout the whole extent of the Delta of the Ganges, and more especially in the tracts bordering on the Hoogly and the Jellinghy Rivers, so great was the mortality, that the bulk of the whole population was sensibly diminished by the dreadful ravages of the distemper. It is remarkable, that the large and populous city of Moorshedabad, from extent and local position apparently very favourably circumstanced for the attacks of the Epidemic, should have escaped with comparatively little loss, whilst all around was so severely scourged." 9.

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* "A few dates may be marked of the principal places attacked in the early part of the progress of the Epidemic, according to the order of their succession. —May and June. One *Thanna* or police Division of Kishnagur; and Mymensing generally. July. Eight Divisions of the former district; Sunergong in the Dacca District; and on the 11th Patna. August. In the first week Calcutta, Dacca and Dinapore; about the middle, Nattore; on the 17th, Sylhet; on the 19th, Jessore; and towards the end of the month, Bhaugulpore and Monghyr. September 15th. Balasore, Burisaul, Burdwan; 17th, Buxar; 18th, Chupra and Ghazeepore; in the latter part Moozufferpore. October, Baulea; 15th, Berhampore and Rungpore. It is only necessary to cast one's eye over the map to perceive immediately how irreconcileable these dates, and the intermediate distances are with the suspicion of local origin."

☞ Compare this with the irruptions of the epidemic almost simultaneously in France, from Lisle to Toulouse!—*Ed.*

Thus it is clear to demonstration that the disease did not originate in Jessore; on the contrary, there is as good, indeed better, reason to suppose that it was carried to Jessore, than that it *first* broke out there. In truth, there is no proof that it sprung up in any one town, or even district, but, from some causes of which we are and ever shall be entirely ignorant, it was generated in the province of Bengal, in several places at the same time, and very probably under similar circumstances. Let what will have been its origin, it did *not* commence at Jessore, nor do we know at what place it did commence, and, consequently, any argument or train of reasoning founded on such assumption is utterly baseless. It is curious, and it should be known, that the epidemic did not, in the first instance, display many of those peculiarities which have since distinguished it. Whilst confined to the province of Bengal, it at once raged simultaneously in various and remote quarters, displaying no predilection for particular tracts, observing no regularity of succession in the chain of its operations. Whilst there existed the same violence in its commencement and rapidity in its progress which subsequently marked it, there were wanting the earliness of declension and entire subsidence, afterwards observed. It rarely altogether disappeared from a town or a tract, but hovered in the vicinity, as though unsatiated yet, and waiting for fresh victims. Thus we see that, bad as the pestilence has been in Europe, it is yet considerably mitigated from its pristine virulence. If it be true, that when once it has set its foot in a region, it continues to spring up in it occasionally, and thus may be considered an addition to our standing army of diseases; still it has lost that character of enduring ferocity which it seemed at first to assume in Bengal. When it has made the tour of the world, it may gradually go out like a flickering lamp, or dwindle into a malady of only ordinary severity. Such has been the case respecting the various plagues which traversed Europe in the middle ages; such has probably been the case, in a still more striking degree, with other pestilential distempers. But this is a matter of speculation; it is certain that, after the present epidemic had become diffused, it observed certain phases or stages of advance, maturity, and decline, which have added to its singularity, but materially diminished its destructiveness.

The only places attacked beyond Bengal, on the eastern side of the Ganges, in the Autumn of 1817, were Moozufferpore, Chupra, and the cantonment of Ghazeepore.

> "And now the Epidemic began to shew one of the most striking peculiarities which characterised its march. It no longer pushed its influence, without distinction or apparent choice in all directions, and throughout every tract coming in its way. It began to affect particular lines, and to fix itself in particular divisions of Country; wholly restricting itself for the time to the course of those lines and divisions. Instead of shooting up from Moozufferpore, Chupra, and Ghazeepore, through the contiguous districts of Gorruckpore and Jiounpore, to the provinces of Oude and Rohilkund, it wholly left that part of the Country; and for many months confined itself to the tracts lying west of the Ganges and Jumna. Thus, from the beginning of November, when it quitted Moozufferpore, until the end of March, when it broke out in Allahabad, on the junction of the Ganges and Jumna, it does not appear, that any one spot of the immense tract stretching to the East of these rivers from the northern point of Saharunpore to the Southern boundary of Tirhoot, was visited by the disease. It will be afterwards seen, that from Allahabad, a new stream of the pestilential virus, now

apparently propagated by regular succession, issued in various directions, and made a great part of this tract suffer for its previous immunity." 11.

The epidemic did no great mischief, till the end of the first week in November, when it reached the centre division of the grand army, encamped under the personal command of the Marquess of Hastings, near the banks of the Sinde in Bundlekund. On referring to the map we perceive that the Sinde, which is not the great Sinde or Indus, down which the admiral of the Macedonian Conqueror sailed, runs to the north-east to empty itself into the Jumnah, and that nearly parallel to, and at no great distance from it, are three other rivers all taking the same course. Such a locality, we may imagine, must have instantly been marked by cholera as its own; and unfortunately in that place and that time, an army was gathered together, to be more than decimated by that cruel scourge. The whole occurrence is of so interesting a description that we cannot refrain from laying it before our readers in the words of Mr. Jameson, who relates it in a manner equally eloquent and feeling. We do this the more willingly, as only a few lame and mutilated versions have been made current by the modern fry of cholera compilers.

> "It was here that the disease put forth all its strength, and assumed its most deadly and appalling form. It is uncertain whether it made its first approaches on the 6th, the 7th, or the 8th of the month. After creeping about, however, in its wonted insidious manner, for several days among the lower classes of the Camp followers; it, as it were in an instant, gained fresh vigour, and at once burst forth with irresistible violence in every direction. Unsubjected to the laws of contact and proximity of situation, which had been observed to mark, and retard the course of other pestilences, it surpassed the plague in the width of its range; and outstripped the most fatal diseases, hitherto known, in the destructive rapidity of its progress. Previously to the 14th, it had overspread every part of the Camp; sparing neither sex nor age in the undistinguishing virulence of its attacks. The old and the young, the European and the Native, fighting men and Camp followers, were alike subject to its visits; and all equally sunk in a few hours under its most powerful grasp. From the 14th to the 20th or 22d, the mortality had become so general, as to depress the stoutest spirits. The sick were already so numerous, and still pouring in so quickly from every quarter, that the medical men, although night and day at their posts, were no longer able to administer to their necessities. The whole camp then put on the appearance of a hospital. The noise and bustle almost inseparable from the intercourse of large bodies of people, had nearly subsided. Nothing was to be seen, but individuals anxiously hurrying from one division of the Camp to another, to inquire after the fate of their dead or dying companions; and melancholy groups of Natives bearing the biers of their departed relatives to the river. At length, even this consolation was denied to them; for the mortality latterly became so great, that there was neither time nor hands to carry off the bodies; which were then thrown into the neighbouring ravines, or hastily committed to the earth, on the spots in which they had expired, and even round the walls of the Officers' tents. All business had given way to solicitude for the suffering. Not a smile could be discerned, nor a sound heard, except the groans of the dying, and the wailing over the dead. Throughout the night especially, a gloomy silence, interrupted only by the well known dreadful sounds of poor wretches labouring under the distinguishing symptoms of the disease, universally prevailed.*—The Natives thinking that their only safety lay in flight, had

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* "Many of the sick died before reaching the hospitals; and even their

now begun to desert in great numbers; and the highways and fields for many miles round, were strewed with the bodies of those, who had left Camp with the disease upon them, and speedily sunk under its exhausting effects. It was clear, that such a frightful state of things could not last long; and that unless some immediate check were given to the disorder, it must soon depopulate the Camp. It was, therefore, wisely determined by the Commander in Chief, to move in search of a healthier soil, and of purer air. The Division, accordingly, on the 13th marched in the South Easterly direction towards Talgong, and Sileia; and after several intermediate halts, on the 19th crossed the clear stream of the Betwah, and upon its high and dry banks at Erich, soon got rid of the pestilence, and met with returning health. But its line of march, during the whole of this progressive movement, exhibited a most deplorable spectacle. Although every means had been taken, by giving up the ammunition carts, and collecting elephants and draught cattle, to procure sufficient carriage, the sick were found too numerous to be moved, and were in part necessarily left behind. And as many who left the carts, pressed by the sudden calls of the disease, were unable to rise again; and hundreds dropt down during every subsequent day's

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comrades whilst bearing them from the out-posts to Medical aid, sunk themselves, suddenly seized by the disorder.—Never was the impressive language of Scripture more applicable than now:—'*In the midst of life we are in death.*'—All security of life was gone; and as youth and vigour afforded no safety, even the healthiest man could not in the morning tell, that he might not be a corpse before night.—Such was the dreadful effect of the scene, that even long after its occurrence, it could hardly be described without shuddering by the eye-witnesses.—How fatal the sickness of this Division, had it continued much longer, might have proved in its political consequences, we have been told from the highest authority. In delineating the rise and progress of the late war, on his return to the Presidency, the Governor General thus spoke of the visitation of his Army.—'The dreadful pestilence, which made such havoc in the Division under my immediate command, forced me to quit the banks of the Sinde, and to seek a more favourable country for the recovery of my numerous sick. I did not find this until I was fifty miles from the river which I quitted.—Fortunately the change of air was rapidly beneficial; for, a very short time had passed when I received intelligence of an invitation said to have been given by Scindia to the Pindarries.—He was reported to have promised them, that if they would come so near to Gwalior, as to make his getting to them easy, he would break his Treaty, and join them with the Force, which he had at his capital.—The Pindarries were in full march for Gwalior, without meeting even a shew of impediment from the troops of Scindia stationed in their route; though the co-operation of his army for the extinction of the Pindarries was an Article of the Treaty.—We hurried back to the Sinde; but this time we chose a position nearer to Gwalior, than what we had before occupied.—We were within thirty miles of the City, and our advanced guard was sent to occupy the passes through the hills which run at some distance South of Gwalior from the Sinde to the Chumbul.—Those passes were the only route by which communication could take place between the Pindarries and Scindia: and I was nearer to support my advanced guard than the Maharajah was to attack it, could he bring his mind to so desperate a stake.—The Pindarries finding their hopes baffled and the passage stopped, attempted to retire; but they had been followed close by our Divisions, were surprised, dispersed, and slaughtered in a number of small actions. In short they disappeared. And thus our objects were completed.'—A few days' longer continuance of the Epidemic might, by entirely crippling this Division, have given a very different appearance to the face of affairs, and prolonged the struggle to an indefinite period."

advance, and covered the roads with dead and dying; the ground of encampment, and line of march, presented the appearance of a field of battle, and of the track of an army retreating under every circumstance of discomfiture and distress. The exact amount of mortality during these few calamitous days could not, from the circumstances of confusion and general disorder, under which it took place, be ascertained with any degree of accuracy. From the Military returns however it appears, that in this fatal week, of 11,500 fighting men of all descriptions,* 764 fell victims to the disorder; and of the camp followers, it was conjectured, that about 8,000, or one-tenth of the whole, was cut off." 17.

On this narrative we may make a few remarks. The disproportion between the numbers of troops and of camp followers who fell, is very remarkable; of the latter one-tenth, of the former one-fifteenth. Yet this disproportion is trifling in comparison with what has since been observed. The camp followers, ill fed, ill provided for in every way, have invariably suffered more than the better circumstanced troops. This might be expected. In the next place, we doubt whether so much should be attributed to the change of quarters on the part of the grand army, as is usually done. The epidemic commenced on the 6th or thereabouts, and declined on the 22d or 23d, having raged for fifteen or sixteen days. Subsequent events have shewn that in India it never continued in vigour in a camp for a longer period than ten or fifteen days. Whether this be or be not the whole truth, we think that it ought at least to be taken into consideration, in reasoning on the event. We have frequently made this reflection on perusing similar relations. Mr. Jameson, we find, is struck with the same idea, which tends to give it additional weight.

We will not pursue the evolution of the epidemic throughout the province of Bengal, nor give a dry detail of names which would convey no information to ninety-nine readers out of the hundred, and of circumstances devoid of any general utility. We shall merely notice events which may be striking or singular in themselves.

Whilst the inhabitants of Hutta and Saugor and the dependencies of Nursingha and Puthooreea suffered very severely, "the troops serving in that quarter, and some of them living in the very centre of the pestilence at that time, scarcely appeared subject to its influence." In June it appeared at Kotah, where it is said to have cut off a hundred men a day, but having got into the high and mountainous track it gradually died away, and never reached the states of Oodeypoor and Ajmeer. To shew the great inequality of the disease in severity, we may mention what occurred to the troops under Major-General Marshall. During their march they fell in with the disease at Jubbulpore on the 9th of April, and suffered during the remainder of the month. Of 8,500 fighting men, only 125 were taken ill, and 49 died, or a fraction less than one in 173.

Nagpore and Mooltay were both severely visited, yet in the intermediate space of 70 miles the disease was not met with, and Baitool, a large town in the direct road from the river to Mooltay, was entirely exempt. At Nagpore, the Bengal Reports from the West are terminated. From Nagpore it passed to Jaulnah and to Bombay; from the latter Presidency a distinct Report has proceeded, and been already analyzed.

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* "The number of fighting men in Camp is here a good deal overrated; for one Detachment left Camp before the commencement of the disorder; and another much larger as early as the 18th.—The two together amounted to nearly three thousand."

> "The Nagpore Subsidiary Force under Colonel Adams, afforded the first striking instance of a large body of men coming into the pestilential medium, and from the previous enjoyment of perfect health, falling at once into a wretched state of sickliness. This Division had, during the early part of May, been occupied in besieging the important Fortress of Chanda; but, although it had undergone excessive fatigue, and met with a few casualties from constant exposure to the sun, it had nothing like marked disease, until, on the morning of its last march on the return to Nagpore, it encamped at Gaongong, a village situated nine miles South of the city. Here it had hardly learnt that the epidemic was raging in the vicinity, when it began itself to experience its unwelcome visits. As usual, its first assaults were most severe. Many of those attacked whilst loitering for water in the neighbouring rivulets, were brought in expiring; some dead. Of 70 cases admitted during that night and the succeeding day, about 20 died.—On the 31st the instances of attack were equally numerous; but in these, the exhaustion was not so sudden, and the subsequent symptoms were less severe. On the 1st of June, the Division moved from Nagpore towards the cantonments at Hoshungabad. The disease then gradually declined; and almost entirely disappeared on the 17th and 18th, after some seasonable falls of rain. The Madras Troops, composing part of the besieging force employed at Chandah, are reported to have suffered equally with their comrades from this side of India." 23.

We have hitherto accompanied the epidemic to the West and to the South. We have not individualized its successive evolutions, a dry and tedious process; we have merely directed attention to such as were remarkable. We shall do the same, as we follow the monster in his march, or rather his irruptions, on the North and East. The point from which we start is the junction of the Ganges and Jumna at Allahabad, where the disease established itself in the Spring of 1818, prevailing for several months with great malignancy, and sweeping off in the town and district nearly 10,000 persons. The troops stationed in the fort and city were not affected until the middle of July following, although holding daily and unrestrained intercourse with the towns' people. In the following passages we shall see that the disease, in India as in Europe, shewed itself most virulent and most intractable in filthy and crowded communities. We shall also see how frequently it passed from one point to another at a considerable distance from the first, but forbore to affect the intermediate towns or villages.

> "On the Jumna, *the epidemic spared Culpee, and almost every intermediate village between it and Etawah.*—The latter place it reached late in May; and, after doing considerable mischief, it would appear to have thence at once stretched across the Doab to Futtigur, visiting very few places on its route. It appeared in the lines of Futtigur on the 10th of June; and thence was communicated to the town. There it shewed little virulence of symptoms; and wholly subsided on the commencement of the rains early in July. It is curious, that Muttra, situated considerably higher up the Jumna than Agra, should have had the disease in the beginning of June, whilst the latter place was not visited until the 1st of July. *In Muttra, a filthy and crowded city, the disease was very virulent, and the mortality great.* In Agra, a dry and airy town, the symptoms were mild and the deaths few. The Cantonments attached to Agra remained

nearly exempt; but those at Muttra being low and near the banks of the river, partook of the general unhealthiness of the town, and lost many men. In both places, the epidemic loitered for more than a month. It then, on the 11th of July, entered the town of Coel; which was alone affected in the Alligur district: the Jails, Cantonments, and the adjoining villages enjoying perfect immunity. We next find the disease on the 20th at Delhi. Here it remained nearly a month, and committed very considerable havoc among the condensed population of an extensive city.

Neither between Agra and Delhi, nor during its route from the latter place to Meerut, did the disorder halt in any of the intermediate towns and villages. Since, of these many were placed very low, and much exposed to masses of animal and vegetable putrefaction, and every other source of miasmata and contagion, their immunity from attack could hardly be ascribed with justice to peculiar healthiness of situation. The reason rather seems to have been that, in this quarter, the epidemic, whether from the pure and elastic air of the Northern Provinces being less favourable to its existence, than the thick damp climate of Bengal; or from its beginning to give way to that general law of Nature, which requires that diseases, like all other things, should have their decrements as well as their rise and increase; or from some other hidden agency altogether unsuspected, was now beginning to die away, and could only be kept alive by strongly exiting causes: such as large bodies of men crowded together in camps and cities. Hence, we find, that between Delhi and Meerut,—a distance of thirty miles, populous and studded with considerable towns and villages,—not a case of the disease occurred;* whilst the latter city, and the cantonments attached to it, suffered under it from the 28th of July to the 20th of August. Few were seized in the town, and fewer in the lines; and in both the sum of mortality fell considerably short of three hundred. So likewise, between Meerut and Saharunpoor, the epidemic kept dormant; whilst the latter city, which is very low and filthy, filled with ruined buildings, and intersected by foul channels with oozy banks, suffered considerably. The disease shewed itself in the town about the end of September; was in full force about the middle of October; and declined from that time until the last week of the month, when it wholly disappeared. It may be, however, that the virus proceeded not in a centrical line from Delhi to Saharunpore, but along the course of the Jumna; as Tannah, a large town, only sixteen miles from the river, and twenty South of Saharunpore, was attacked before the latter place." 28.

The epidemic can be traced no further North than Saharunpore, the high mountain ridges checking it, though the poverty and wretchedness of the inhabitants seemed to render them equally likely to take it, and to suffer severely from it when taken. How perplexing the rationale of the outbreak of the disease in detachments of military has ever been in India, we might readily prove. It seems clear enough that such detachments passing through places where the disease existed, were frequently affected shortly afterwards. This looks like the sequence of effect and cause, and probably it was so. But granting this, which we readily do, it is obvious that the influence of contagion is not demonstrated by such examples; on the contrary we think that the circumstance is rather adverse than favourable to the idea of such agency. It is passing strange that a body of troops marching round, or by, or even through a place where an infectious disease exists, should happen to come in contact with those who have it, or with those who can convey it. Suppose that a very contagious malady, an exanthema, for instance, measles, were prevailing in London, and that a body of king's troops were to pass through the metropolis on their way to put down a Reform insurrection in the North; should we probably find those troops become affected, should we look for their becoming so? We should not, and of many divisions so circumstanced we should certainly expect that the majority would escape. But if the prevailing disease were another sort of epidemic, an ague, for instance, our expectations would be widely different; and probably no body of men passing through the metropolis at such a time would fail to be attacked by it. This is merely an argument founded on probabilities, yet we think that it shews the impossibility of proving or even supporting the doctrine of contagion by such instances.

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* "By a subsequent report it indeed appears, that the epidemic slightly visited the towns of Ghazeeabad and Mooradnuggur; but in them the cases were so few as hardly to affect the statement in the text."

But this is not all. If the detachment affected by passing through a district in which cholera is raging, communicate the disease to another detachment previously healthy, that is, if the latter are attacked by cholera very shortly after coming into contact with the former, shall we not be forced to acknowledge the agency of contagion or infection on this occasion? This will not admit of a direct reply. As only a very few instances of this kind were adduced we deem them inconclusive—first, because the disease was so irregular in its progress, in its appearance, and its disappearance, that the occurrence might have been a mere coincidence; secondly, because the observation of the fact itself might have been incorrect. This is no excessive fastidiousness on our part; it is the mere application of the ordinary cautions in the admission of evidence to this particular case, the mere illustration of the precept, post hoc non ergo propter hoc.

If, indeed, such examples were numerous, common sense and rules of reasoning equally demand the abandonment of these scruples. If one thing follows another, in the majority of cases that admit of their sequence, we are bound to admit them as cause and effect, in the absence of positive proof, or very satisfactory arguments to the contrary. It is equally unphilosophic to reject a general rule because it has exceptions, and to erect an exception into a general rule. In point of fact, the cases of communication of cholera from one detachment to another are neither numerous nor satisfactorily authenticated. The following, for instance, may be considered as rather a favourable sample of the whole; yet in this we shall find that, previously to the arrival of the body which is accused of bringing the cholera, some cases had occurred amongst those who are said to have received it. It must be strangely constituted minds, indeed, that can feed on such a dish as this.

"On the 23d of July, a Detachment, consisting of a troop of the Horse Artillery Brigade, the Rocket troop, and 5 Companies of the 1st Battalion 25th Native Infantry, marched from Meerut to join the force collecting at Hansi under Brigadier Arnold, for service in the Bickaneer and Bhatty countries. They remained perfectly healthy on their march to the Jumna, and during several subsequent days, in which they were encamped on its East bank. On the 29th they crossed the River, passed through Delhi (the disease being then at its height in the town) and encamped outside of its walls, about a mile to the West. On the 30th, they continued their March in a North-westerly direction; and on the morning of the 31st, they were attacked by the Epidemic.—It continued unabated amongst them, until the 6th; when they joined the general camp at Hansi. *Although one or two cases had occurred in this Force a day or two pre-*

viously to the arrival of the Meerut Detachment, it was the unanimous belief of the Medical Staff serving with it, that from the latter, it got the disease in its epidemical form. What gives a colour of probability to this conjecture is, that the disorder was not met with in any of the villages lying in the immediate line of the route of the Detachment from Delhi to Hansi; and certainly did not appear in the latter town until some time after its prevalence in Camp, and then but very slightly.—On the other hand, it was generally rumoured that, several intermediate places between Delhi and Hansi, and betweeen Delhi and Kurnaul, particularly Paniput, had been affected previously to Hansi being brought within the pestilential influence.* It continued with the troops until the 12th of August; and accompanied them in their march in a W. N. W. direction to Futtihabad, Rhauneea and Sirseea, and in their retrogade movement on Hissar. Of the whole Force, only about 250 men were attacked. The symptoms were comparatively mild; and the deaths few. The Epidemic did not reach Loodeehana; and appears in this quarter to have been limited by the river Sutledge.

From Delhi or Aligurh, the disease would seem to have spread in a South West direction to the principality of Jeypore; the capital of which it reached in the latter end of August. Here it was neither malignant nor general: its attacks being almost confined to the most wretched class of the inhabitants, and the whole mortality throughout the circumjacent country scarcely exceeding a thousand men.—On the 12th September it began to abate in the city; and on the 14th it entered the camp of a detached Force commanded by Major Agnew, at Titirya, twenty-five miles South West of Jeypore; and there raged with very considerable virulence till the 28th, when it gradually abated. Of 96 Europeans, and 4100 Natives composing the fighting part of this Force, the admissions were 292, of whom 122 died. The mortality amongst the camp followers could not rightly be ascertained. The Epidemic was no more heard of in this direction: neither the town, nor the valley of Ajmeer being affected; although another large division of the Rajpootana Force was encamped in the latter, on similar ground, and under circumstances apparently in no wise differing from those of their less fortunate comrades at Titirya." 31.

In the middle provinces of Bengal, it maintained its character for eccentricity, decimating one place, totally omitting another, merely playing with a third. It is curious that the troops and camp followers in personal attendance upon the Marquess of Hastings, on his return from the upper provinces, again fell in with the epidemic on the 20th or 21st of April; but now its attacks were nearly restricted to such persons as had not been with the centre division of the army in the preceding Autumn.

"In the foregoing pages, the singular fact of the virus shewing an unwillingness to ascend high and mountainous tracts of Country, has been noticed.—Thus it wholly avoided Kumaoon, the Hilly Districts North of Hurdwar, and the elevated stony belt which girds in the Rajpootana States to the North West.—But this rule was not without exception; for, in June, it passed the lofty range of mountains guarding Napaul to the East, and visited Khatmandoo, Patun, and Bhatgoon in the subjacent valley; and, in October following, it got from Sylhet to the independent countries of Kashar and Munnipore, on the eastern borders of Bengal. But, even here, it might be seen that high lands were not congenial to it; for it had been raging with very great violence in the adjoining District of Sylhet, before it was enabled to overcome the obstacles opposed to its progress by the intervening mountains.—The same causes may be assigned for its partial occurrence among the Ramgur and Sirgooja Hills; whilst Sonepoor and Sumbhulpore were largely affected: apparently from Cuttack, along the course of the Mahanuddee." 33.

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* Had a detachment of soldiers, with some cases of cholera, arrived in Haddington from Newcastle, a few days before the disease broke out in the former, would we ever have heard the last of such a proof of contagion?

Why the disease should stop at a mountain range, supposing it essentially propagated by contagion, we know not. It may be said that there is little or no communication over mountains. This has never been proved, and, in the absence of positive evidence, is more likely to be false than true. In India, when a place was smartly assaulted by the epidemic, the inhabitants almost invariably fled into the villages and country places; they had no belief in its contagiousness, and, consequently, no obstacle was opposed to their dispersion, no objections offered by the inhabitants of the open country, or of neighbouring towns, to their reception. If the epidemic visited the plains at the foot of mountain ridges, it is more than probable that the panic-stricken people would flee into those mountains or cross them for safety; and when once the comparative salubrity of hilly districts was established, such emigration would be likely to be much increased. These are probabilities at all events, and may counterbalance any vague and general assertions on the part of the contagionists. The ensuing quotation, on the duration of the epidemic in different parts of Bengal, will conclude our notice of its origin and progressive evolution in that Presidency.

"As no more favourable opportunity will hereafter occur, a few particulars may be here mentioned regarding the times of appearance and periods of duration of the Epidemic during its stay in Bengal.—It has been stated in the text, that it first broke out epidemically in Calcutta in August 1817; and that it continued prevailing in the city, with more or less violence, till the ensuing August. From that time until the following April, when it recurred with considerable violence on occasion of some variable, unseasonable weather, only a few cases came to notice. Now (May) it has again subsided; but fresh instances of the malady are sure to occur, as a consequence of the sudden vicissitudes in the atmospherical heat and moisture, produced by every North Wester.—It has probably observed a like course in Jessore; but its progress there cannot be exactly learnt, in consequence of the absence of a Medical officer from that station for many months.—It appears, however, that since the beginning of the present year it has been constantly in existence, and destroying many persons in the North and Eastern parts of the district.—In the Backergunge district it remained until the end of last year, since which time it would not appear to have done much injury. —In Bullooah and the tracts near the mouth of the Ganges, it began in February, and terminated in June, 1818.—In different parts of Mymensing it has existed since June, 1817. So likewise in the city and District of Dacca.—In Tipperah, after wholly disappearing during the Cold Season, it returned in March, 1818; and remained till the breaking up of the subsequent Rains, from which time it seems again to have retired.—In Sylhet its career has been singularly various. After retiring in October, 1817, and being for several months dormant, it returned in the end of March, and subsisted till the setting in of the Rains, when it a second time nearly disappeared. But, about the middle of October, it suddenly increased all over the district to as great a degree, and with greater fatality, than on its first appearance. It gradually declined in December, and again withdrew in the end of the year. Finally, it made its fourth visit in the commencement of the present Hot Weather; but not generally.—In Rajshahy, it prevailed most in September and October; and disappeared about the middle of November, 1817. It again appeared in the following Hot Weather, and frequently proved fatal.—It commenced in August in the city of Mooshedabad, and has continued till now; but always in a very mild shape.—In Nuddeea, as we have seen, it began generally in July and August. Towards the latter end of the year, it became less severe. With the heavy rains, which set in towards the end of the following February, it recurred in various parts of the District. As in Calcutta, it declined in August following, was very rare in the cold months, and again got head in the beginning of the present Hot Weather.—In Burdwan a few cases happened early in the Rains. In September the mortality caused by it was alarming; and, from that month until the end of the following year, few days passed without the disease appearing in some of the villages. It was particularly violent in the commencement and at the termination of the Hot Winds. Since January, 1819, no account of its progress in that quarter has been received.—In the district of Bhaugulpore it continued its ravages, without intermission, from August 1817, to May 1818, when it considerably abated; and from that time till now only occasional cases have occurred.—At Monghyr it began in the latter end of August; decreased in October and November; was not heard of in December; recurred partially in January and February; increased much throughout the Hot Weather: and finally altogether withdrew in September. In Behar it began in August; nearly disappeared in the Cold Season; recurred about the 20th of February; and continued active till the ensuing November; when it again nearly ceased; to re-appear in March and April. Of late the disorder has appeared much in the South West parts of Bengal, visiting severely Midnapore and Cuttack, which it almost spared in the early part of its course. —But it must not be supposed from the foregoing statement, that the disease now rages with that width of range, or generality of attack, which it took in the first year of its existence. In Calcutta certainly, and probably in almost every other part of the Lower Provinces, it is no longer strictly Epidemic. The case is this. A disposition to produce the disorder still exists in the atmosphere. This is brought into play by sudden alterations of the weather. Then perhaps a dozen of cases, and two or three deaths occur; the Settlement is immediately thrown into alarm; and it is generally rumoured, that the cholera is more prevalent than ever. The truth nevertheless is, that more individuals probably perished from the disease in one day in the Autumn of 1817, than now do in a quarter of a year. It should, moreover, be recollected, that the disease is endemical in Bengal in the sultry periods of the year; and that were it not for the present scared state of the public mind, the few cases now occurring might, as in former years, pass nearly unnoticed. As it is, all is magnified by apprehension. As is quaintly observed by one of the Medical Staff, 'the disease, like some foul fiend is still wandering to and fro, and like the author of all mischief spreads universal terror before it.'—The disorder having in April severely attacked several detachments of troops marching through the Cuttack and Midnapore districts, a notion was entertained, that there was something in the vicinity of the Soobanreeka river, which divides these tracts near Balasore, connected with, and immediately leading to its rise. But this was quite a mistake; for it was learnt upon enquiry, that the several divisions got the disorder equally readily in different parts of Cuttack; and that it always broke out after a fall of rain, or other manifestly strong exciting cause. Besides, that the epidemic has been long known at Balasore, and had visited several detachments in the Cuttack jungles so far back as the Cold Weather, and Juggurnath lines in the Spring of the preceding year." 37.

A retrospect of the origin and progress of the epidemic in Bengal would give us much trouble, and our readers little amusement. Those who like may do it for themselves. It is enough to say that it evidently arose about May or June, 1817, after seasons remarkable for irregularity, and a preceding year distinguished for epidemic sickness and mortality. It did not spring up in Jessore, nor is it proved to have originated in any one town or even district. But it was first observed in the plains of Bengal in the neighbourhood of the Ganges. Near a sacred river it was born, and for rivers it has ever subseqently testified a strong regard. What its causes were we know not, we shall never know; but if, as the evidence distinctly proves, it originated at once in distant districts, we must necessarily conclude that those causes were independent of each other. From its native places it diverged in all directions, but its tendency to the West and South was almost as marked at the first, as it has since remained. In its progress it displayed singularities and excentricities which have rendered it proverbial, but these were always shewn in the detail; its progressive evolution was westward. In the record of its atrocities we can still decipher, though sometimes darkly, that the needy and the debilitated were most frequently its victims. Yet the cholera of India, as of England, would seem to have disdained all laws, even its own; and, as if to vindicate its power and confound those who were inclined to limit its influence, it occasionally burst with fury on an army, a town, or a district, sweeping off victims of all descriptions, and attacking classes which it usually spared. Even here, however, we may pick out something like a system, and whenever communities or masses suffered greatly, we may commonly perceive, on close inspection, that they were weakened and predisposed by some efficient agency.

SYMPTOMS OF THE DISEASE.

We need not, and of course we shall not, go at length into these; they are as familiar as household words. But it will be necessary to advert to some particular points. It has been roundly asserted that the diarrhœa which has generally been found to precede the attack of cholera in Europe, and the fever which has usually been observed to follow it in those instances where the patient was not cut off early, were noticed and described in the Indian epidemic. In our analysis of the Reports from Bombay and Madras, we have shewn that this assertion is untrue, as regards the disease in those parts of Indostan. Let us see what was the case in Bengal.

> "The attack was generally ushered in by a feeling of fulness and pain in the stomach, and swelling of the abdomen; with sickness, and a desire to go to stool. Then came, *almost immediately, vomiting and purging of a pale thin fluid,* without taste or smell; great anxiety; oppression, and sense of constriction about the heart and præcordia; thirst and internal heat. These symptoms were accompanied, or quickly followed, by severe cramps; generally beginning in the fingers and toes, and thence extending to the wrists and fore-arms, calves of the legs, thighs, abdomen and lower part of the thorax.
>
> Together with these signs of general depression, the action of the heart and arteries was uniformly diminished. The pulse sunk rapidly at the wrists and temples; and at last could no longer be felt, or was merely perceptible by a slight and indistinct fluttering. The respiration became laborious and hurried, with sighing, and long and frequently broken inspirations. As the blood forsook the extreme vessels, and withdrew to the great cavities, the exterior surface of the body grew pale, shrunken, and cold. The skin became clammy, dank and disagreeable to the feel; bedewed with large drops of cold sweat; and discoloured of a leaden, bluish, purple, or livid hue. The countenance was greatly changed; the features were contracted, collapsed, and ghastly.—The eyes sunk in their sockets; fixed and glassy; covered with a thick film; heavy, dull, suffused, and surrounded by dark brown or black circles.—The lips livid,

or of a purple colour.—The finger-nails blue; the palms of the hands white, bleached, and puckered into folds.—The mouth was dry and parched; the tongue bluish, or white and faltering; and the voice hoarse and low.

There was sudden and great prostration of strength.—The hands trembled; and the action of the voluntary muscles was uncertain and unsteady.—The patient could no longer stand or walk without assistance: He became as feeble as a child; staggered like a drunken man; and unless supported, sunk down like one in the last stage of debility from fever.

In feeble habits, and where the disease attacked in extreme violence, the scene was soon closed.—The circulation and animal heat were never restored.—The spasms, vomiting, and purging were frequently renewed.—The thirst continued incessant and unquenchable; and was no sooner gratified by draughts of water, or other fluid, than dreadful retching ensued.—The burning heat, anguish, agitation, and restlessness continued unabated. At length, the patient, exhausted by the depressing influence of the malady, and the repeated large discharges, fell into a listless state; and had no longer strength for either full vomiting or purging. A little fluid was now only rejected by the mouth, as the abdominal muscles were thrown into spasm; or passed off involuntarily downwards, as the body turned round in bed.—The patient remained deadly cold; grew weaker and weaker; and insensibly sunk into death; or was carried off during a repetition of spasms; sometimes in one, but more frequently within four, six, or twelve hours." 40.

After adverting to the fatality of the collapse, and the unquenched and unquenchable thirst, Mr. Jameson proceeds thus.

" Much variety, however, occurred in the kind, order, and sequence of the symptoms; according as the virus of the disease happened to be more or less concentrated, or the individual affected of a strong or feeble constitution. *Vomiting was the symptom of earliest and most frequent occurrence.* Next came purging; then the cramps, and spasms. Frequently, however, this order was reversed, and the purging and spasms took the lead of the vomiting. Sometimes the cramp preceded both. Sometimes there was no vomiting; sometimes no purging; sometimes no spasm, throughout. Sometimes all these symptoms were simultaneous; and the vomiting and purging took place together, as if caused by sudden contraction of the alimentary canal in its whole extent. In some rare instances, the virulence of the disease was so powerful as to prove immediately destructive of life; as if the circulation were at once arrested, and the vital powers wholly overwhelmed. In these cases, the patient fell down, as if struck by lightning; and instantly expired. Others, again, sunk after making one or two feeble efforts to vomit, and drawing a long and anxious inspiration. Some recovered from the insensibility produced by the first shock, and afterwards went through the regular course of the disease." 42.

The foregoing passages set at rest the question of antecedent diarrhœa in the cholera of Bengal. Comment upon them is superfluous; and if any one is hardy enough to affirm that in this particular the European and Indian epidemic have not displayed a striking *general* difference, the statement is only to be met by a flat denial, and a confident reference to the only authentic and trust-worthy documents we possess. Argument there need be none; it is a matter of evidence, and of strict deduction from evidence only.

Passing over particular symptoms, which we do for want of space not inclination, we arrive at the consideration of the more immediate consequences of the attack; in fact, at that of consecutive fever. If our readers have referred to the Bombay and Madras Reports, or to our reviews of them, they will find that the former expressly declares that fever was not observed in that part of India, whilst the latter implies nearly the same thing. It has been imagined that consecutive fever was as common a consequence of cholera in Bengal as in Europe. This will be found to be an error. It appears that Mr. Jukes, an individual reporter, did mention in his letter the occurrence of secondary fever, yet that, if the description be carefully considered, was not only not identical, but indeed hardly similar to, the form which we have seen in this country. The present report, which may be looked on as the sum, or co-efficient, of the experience or expressions of many, is rather vague in this particular. We shall lay before our readers all the information which it offers on the point.

> "Among the Natives generally, where the attack was exceedingly severe, the constitution sunk with scarce an attempt to rally; and of those who recovered, the secondary stage was of short duration, and unaccompanied with much reaction. In the milder cases, the attack either was repelled by the unaided powers of life itself, or readily gave way to the simplest means of cure. The pathognomonic symptoms of the disease speedily abated; the patient sunk into a profound and quiet sleep; and the breaking out of a warm equable perpiration all over the body, evinced the restoration of the vital powers, and might be considered an almost infallible sign of recovery. *In such cases, slight debility, and irregular action of the intestinal canal, were the only ill consequences of the attack;* and a copious discharge of bile, or fæculent matter, either natural or procured by the exhibition of a single dose of a simple purgative, completed the cure." 51.

We should observe for the sake of accuracy and clearness, that "the secondary stage," above alluded to, was not the stage of fever, but of mere reaction. This is distinctly pointed out in a preceding passage, which we need not quote, as the context is of itself sufficient to explain it. In the milder cases, then, among the natives, we see that there was really no consecutive fever, a feculent or bilious stool completing the cure. Has it been so with "the milder cases" in Europe? As a general rule, we say that it has not. "But hold," cry the importationists, "why not tell us what occurred in the severer cases? In them it was that the distinctive fever occurred; by them the identity we insist upon is proved. It is true that we cannot procure evidence of antecedent diarrhœa; it is true that we cannot convince you, obstinate as you are, and peculiar as the construction of your minds must be, of the existence of fever in Bombay and Madras, in opposition to the written statements of those Boards; all this we regret to say is too true, but all this amounts to nothing, if we can demonstrate by the shadow of a shade of proof, that consecutive fever was observed in Bengal. We do not care for the particular kind of fever, we do not mind any little difference it may display from its European progeny or rather self; all we want is fever; and if by any means we can procure it, you may rest assured that we will make the most of it." Well, then, we will satisfy the anxiety of these gentlemen.

> "But, in the more violent forms of the disease, recovery was longer protracted; and the sufferings of the patient were more severe.—After the most distressing symptoms had been in great measure subdued, he was still harassed by constant thirst, irritability of stomach, pain and soreness of the Epigastric

region, watchfulness, and confused dreams. The stomach and bowels did not for a long time regain their usual tone; and the frequent occurrence of *obstinate dysentery or diarrhœa proved, that almost irreparable mischief had been done to the whole of the chylopœtic viscera.* In these cases the debility was great, and of long duration; and the strictest attention was required during many days, to prevent the patient from sinking entirely.—Sometimes, the debility terminated in incurable dropsy.—In some instances, partial loss of vision; in others, of hearing, ensued. In one man paralysis of the bladder and lower extremities occurred early, and continued long after the cessation of the common symptoms of the disease.

It was almost uniformly observed, that health was soonest restored in those cases in which fæculent, black, and acrid motions were early procured; and that on the other hand, their absence was almost uniformly marked by feverishness, sour eructations, flatulence, constipation, and other signs of want of tone and sluggish action of the hepatic system.—*Fevers of the remittent, and intermittent type were among the most frequent sequelæ of the disorder;* but among natives, and especially those of weakly frame, *they could not be considered to form an essential part of the attack.* They were hardly ever immediately superinduced upon the collapsed stage, *and seemed rather an incidental affection, in bodies much predisposed to take on new forms of disease by great existing debility.*

When the disease ran its full course with Europeans, and with Natives of robust athletic make, the following appearances generally presented themselves. What may be termed the cold stage or state of collapse, usually lasted from twenty-four to forty-eight hours; and was seldom of more than three complete days duration. Throughout the first twenty-four hours, nearly all the symptoms of deadly oppression; the cold skin, and oozing of clammy sweat from every pore, the feeble pulse, occasional vomiting, purging, and cramps; the thirst and anguish continued undiminished. Then the system shewed symptoms of revival; the vital powers began to rally; the circulation and heat to be restored; and the spasms, sickness and desire to go to stool, to be considerably lessened. The warmth gradually returned; the pulse rose in strength, and fulness; and then became sharp, and sometimes hard. The tongue got more deeply furred; the thirst continued with less nausea. The stools were no longer like gruel or rice water; they, usually between the third and sixth day, became first brown and watery; then dark green, black, and pitchy; and the bowels during many days continued to discharge immense loads of vitiated bile; until with returning health, the secretions of the liver and other viscera gradually put on a natural appearance. These discharges were generally hot, acrid, and passed with griping and tenesmus. Sometimes they were of a bright yellow colour; and the surcharge of bile was so great, as to be ejected in a pure stream from the stomach. It was remarked that, where the motions consisted of a chocolate-coloured fluid, with floculi swimming in it, the patient rarely recovered.

The fever, which almost invariably attended this second stage of the disease, may be considered to have been rather the result of an effort in Nature to recover herself from the rude shock, which she had sustained, than as forming any integral and necessary part of the disorder itself. It partook much of the nature of the common bilious attacks of these latitudes. There was the hot dry skin; the foul, deeply furred, dry tongue; parched mouth; thirst; sick stomach; depraved secretions; restlessness; watchfulness; and quick variable pulse; sometimes with delirium, stupor, and other marked affections of the brain.

Generally, when the disorder proved fatal, after reaching this stage, the tongue, from being cream-coloured, got brown, and sometimes black, hard, and more deeply furred; the teeth and lips were covered with sordes; the state of the skin varied, chills alternating with heats; the pulse became extremely quick, weak, and tremulous; hiccough, catching of the breath, great restlessness, and deep moaning succeeded; and the patient soon sunk, incoherent and insensible, under the debilitating effects of low nervous fever, and frequent dark, tarry, alvine discharges.

In other cases, this secondary period ran a somewhat different course. As the action of the heart and arteries was renewed, and the natural warmth of the body returned, an unusual degree of energy succeeded. The brain was evidently affected; and the patient was quite insensible to the great danger into which he had fallen. The pulse rose as high as 120; great heat, especially over the large cavities, was complained of.—There was extreme agitation and distressing thirst. The patient continually called for cold water, to relieve the burning sensation of the abdomen. Sometimes a warm perspiration broke out near the wrists and forehead, which afforded temporary relief to his sufferings.—To this state of excitement that of collapse quickly succeeded. There was then great prostration of strength; the bowels became quite torpid; severe pains occurred low down in the abdomen, near the site of the rectum, which were always aggravated upon stools being procured by medicine. The state of the stomach now excited surprise; its unnatural irritability was entirely gone, and the most nauseating medicine could be poured into it without exciting vomiting —It rarely occurred that the patient survived the great sinking produced by this stage; and even where good fortune and the strength of his constitution carried him through it, he suffered long after from debility and disordered bowels." 56.

None who read impartially the foregoing description, can consider it as perfectly applicable to what has been observed in Europe. As a corollary to it, we may mention some facts related by Mr. Jameson. In the centre division of the army, where, it will be recollected, the mortality was so frightful, "it was singular that neither with Europeans nor Natives were those symptoms of strong re-action, and subsequent fever, which among the former at least, were of almost constant occurrence in the lower parts of India, observed." In many the recovery, we are told, was remarkably rapid.

In the Nagpore Division, "the only general after-effect of the attack, was extreme debility." In the Rajpootana Force, "fever was a rare consequence." In Jeypore, "the sufferers generally recovered surprisingly fast; in some instances in a few hours." In the Hansi Division many had to undergo fevers of the remittent or intermittent type. At Delhi, Meerut, Coel, Agra, and Futtigur, "the disease ordinarily left no other ill effects than weakness and disordered bowels."*

So much for the consecutive fever. It will be noticed that the fever that did ensue, was observed in the lower, marshy parts of Bengal; that it assumed a remittent and intermittent type; that it seemed rather a sequela than an integral part of the malady; and, finally, that it was limited, or nearly limited to the severer cases. When the foregoing circumstances are conjoined with the immunity from all fever particularly specified in the instances cited above, we conceive that the impression on unprejudiced minds must be adverse to the "perfect identity" of the cholera fever of England and the fever after cholera in Bengal. However, we have stated the recorded facts, and others may draw from them what inferences they please. We omit the two succeeding sections on the Appearances after Death, and on the Proximate Cause of the Disease. The usual cadaveric appearances and want of appearances are tolerably familiar—the proximate cause would not be a whit more so, did we dedicate the whole Journal to its consideration. It is singular that some persons have gravely affirmed that the epidemic cholera presents no distinctive symptoms during life, and is only to be certainly recognized by its cadaveric features. The absurdity of this dogma requires no serious refutation.

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* Those who quote the Bengal Report to shew that the consecutive fever was present in the epidemic there, seem not aware of the dilemma into which they draw themselves in respect to the argument of IDENTITY! We have shewn that the consecutive fever was not observed in the Presidencies of Madras or Bombay. Taking then the admission of the Bengal Report in its fullest latitude, it only proves that the Epidemic on one side of the Jaggernaut Pagoda had consecutive fever, on the other side none! On the left bank of the Kestna fever followed the spasms and purging—on the right bank there was none! On one side of the Ghaut Mountains we had consecutive fever—on the other side nothing of the kind! But the disease having crossed the Indus, the Euphrates, and the Caspian, the epidemic, all at once, resumed an important feature which it had

REMOTE CAUSE OF THE EPIDEMIC.

The Bengal Board observe that they have now arrived at a branch of their enquiry, in which new obstacles start up at every turn. The testimony of one contradicts that of another; facts themselves are irreconcileably opposite, that is they disprove any theory founded on a particular circumstance or set of circumstances; and finally the cautious reasoner is forced to take refuge in scepticism from the importunities of exclusive speculators. In this particular cholera really presents no anomaly, for the causes of former epidemics have proved as obscure as those of the prevailing one. The Board observe, and we think they observe truly, that their labours are rather calculated to prove our ignorance than to establish our knowledge; to prove in what the generation or dissemination of the disease did not consist, than in what it actually did. This is the modest, and, unfortunately, it is also the true state of the question.

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left behind it on the banks of the Ganges, and carried that feature with it to the Thames and the Clyde. Would we find small-pox "invariably" confluent on one bank of a river, and "invariably" discrete on the other? No. But the fact is, that although some grand and invisible agents were at work to produce an epidemic disease, these agents called it forth as independently in each locality, as the grass grew and the water ran independently in each of the said localities. Neither the disease nor the causes of it migrated from one country to another. They were not *propagated*—they were *evolved*. Hence it was that the cause, whatever it may be, was modified in its effects by the locality where it operated. Why was the disease more prevalent or fatal in Musselburgh than in Edinburgh—in Ely than in Durham—in Paris than in London—in Newburn than in Haddington? Look at the localities, and see if they are similar. This we conceive is the philosophical view of the subject.

The term *propagation*, we maintain, is singularly improper and totally inapplicable to this epidemic and to its cause. *Evolution* is the fitter term, and ought to be substituted in all places for the absurd phrases of "marching," "travelling," and "spreading." Did cholera *march* from Newcastle to Haddington? If so, which was the road? From London to Paris? What *route* experienced its ravages? All we can safely say is, that the *evolution* of its cause took place in Haddington after it occurred in Newcastle—in Paris, subsequently to its evolution in London.

Vicissitudes of temperature and irregular seasons have been looked upon as the real causes of the epidemic. Troops were constantly exposed to the former yet they never received the cholera, until they manifestly came within the sphere of its influence. Whether the previously irregular seasons had any thing to do with its production, we cannot certainly tell; but it is certain that, being once set up, it has subsequently been evolved in defiance of season and in all temperatures, though season and temperature have both exerted a perceptible but inconstant influence over it. The blighted and noxious early crop of rice of 1817 has also been accused of originating the malady. Now the epidemic was in Nuddeea and Mymensing in May, and the seed of that calumniated rice-crop was only *sown* in June. So much for the damaged rice hypothesis. Of the origin then of the epidemic we know no more than this; that previously to its appearance the seasons were extremely irregular and unnatural, the people sickly to a great degree, and the country inundated. As the Board remark, the humidity of the atmosphere and the inundation of the Bengalese plains, assimilated the condition of the country to that of Egypt and the neighbouring parts of Ethiopia, lands stigmatised in every age as the original source and seminary of the plague. We may state broadly that all researches into the primary cause of the epidemic have failed, at least they have led to no more certain conclusions than those which we have mentioned. It remains for us to investigate the progress of its evolutions.

"Perhaps the most singular fact in the whole history of the disease, was the predilection which it shewed to spread in one particular direction.—From the remote period of its first appearance in the Eastern parts of Bengal, in the Autumn of 1817, to the hour of its arrival on the Malabar Coast, as has been seen in a preceding part of this report, its path was almost uniformly from East to West; and, if we may be allowed so to express ourselves, it seemed so bent upon pursuing this Westerly course, that rather than deviate from it in an opposite direction, it would for a while desert a tract of country, to which it afterwards returned under circumstances more congenial to its disposition.—Thus, although it appeared in the beginning of November, 1817, on both banks of the Jumna near Shergur, it did not then shoot Eastward across the Doab; but, leaving all on that side of the river untouched, spread far and wide through Bundlekund, and all the districts to the West.—In like manner, when it had reached Cawnpore in the following Spring, it shewed a marked aversion for Bareilly and the other tracts east of the Ganges; but readily stretched through the Doab to Agra, Coel, Delhi and Meerut; and thence far to the West, by Hissar, Jeypore, and the detached camp of the Rajpootana Force.—To give another instance.—Although Allahabad and the whole of that District, was largely afflicted in March, the infection was not thence communicated to Sooltanpore, Fyzabad, Oude, and the Districts bordering on the Gogra and Goomtee; but from the South East quarter, by the way of Tirhoot and Gorruckpore.—The case of the small Cantonment of Mulhye on the Eastern frontier of Tirhoot, which would seem to have received the disease from the West, and of one or two other places, in which the range of aberration was very limited, need not invalidate a rule deduced from an observance of a general course extending several thousand miles.

From knowing, that during the existence of former pestilences, the diffusion of the virus could be frequently traced to the motion of particular currents of air, it was natural to look for an explanation of this extraordinary regularity of progression in the prevailing course of the winds during that period.—Accordingly, upon reference to the various reports of the rise of the disorder in different parts of the Country, it was discovered, that in a vast majority of instances the wind was blowing from the East or South East quarter, at the time of its breaking out.—This may be stated to have been almost without exception the case in Bengal; throughout which the Epidemic arose in the Rainy Season, when the wind blows almost invariably from the South East.—In Calcutta, Nuddeea, and many other places, indeed, the influence of particular directions in the wind was so evident, as to have at length almost justified a prediction, that the abatements and aggravations of the disorder would certainly correspond with their alternations.—Thus in Calcutta, it declined in virulence and frequency as the Northerly wind set in, in November 1817; and again recurred with a South East wind in the following February.—Its re-appearance, again, in April 1818, was preceded by a continuance of wind from the North East: an uncommon quarter for that season of the year.—So in Nuddeea, the disease declined for a few days on the wind blowing steadily from the North; but no sooner had it again veered to the East, than it recommenced its ravages.—The same prevalence of Easterly and Southerly winds attended its progress through Tirhoot, Sarun, Behar, and Shahabad.—At Moozufferpore, Buxar, and Ghazeepore, this had been the prevailing wind for some time before its appearance.—In the camp of the Centre Division of the Army, the wind, which from the 21st of the preceding month had blown strongly from the West, suddenly changed round to the East quarter on the 7th November; and there are grounds for believing, that from that day the disease raged in camp.—With the Left Division again, the wind ranged from East to South, from the 1st to the 14th of April.—The Epidemic was with them on the 9th, and abated as the wind came round to the West.—The state of the winds is unfortunately omitted in the returns from the Nagpore Force.—With the Rajpootana Force they are stated to have been variable; but in Jeypore, Brigadier Arnold's Camp, Agra, and other stations of Central India, they were Easterly during the prevalence of the disease." 99.

To this rule there were exceptions, but they were neither numerous, nor of magnitude sufficient to upset the general law. The subsequent history of the disease has confirmed the fact of its tendency to appear successively in a direction from East to West. It is true that China and Japan have been visited, and no less true that, further to the East, it had only the deep blue sea to conquer, at least for many a league. Yet this Eastern irruption has constituted a sort of parenthesis in the history of cholera, and its progress has still been that which man and civilization have made before it, towards the Western Ocean and the Western Isles. From Asia our fathers came—from Asia came our arts, our learning, and our gods—and epidemic diseases, for example, influenzas, have generally begun in the East and terminated in the West, like the light of the sun.

Why should the cholera evince so marked a disposition as it has done to follow the course of rivers? Such was the query of the Bengal Board in 1820, and the answer that has been given is known to most of our readers. The rivers are the great channels of human intercourse in India, say the contagionists, and the course of rivers it accordingly pursues. The reply was specious—as a reply, almost unanswerable. Yet mark what has occurred in our own land. Here, rivers are not the great channels of human intercourse; there are others as great, if not greater, than they. Yet still, in England, the cholera has shewn its ancient preference for rivers, appearing on the banks of one after another, spurning all intercourse with intermediate spots. Nay it has raged on one side of a river, as in Southwark, and almost refused to pass a bridge which myriads of men were traversing.

"From the rise of the disorder on the banks of the Ganges and Burrumpooter to its arrival at the mouths of the Nerbudda and Taptee, it excited the surprise of the Medical observer.—Thus from Sonergong in the Dacca District, where the Epidemic broke out in July, 1817, it crept along the banks of the Megna to Naraingunj and Dacca; attaching itself chiefly to the ferries and market-places in its vicinity.—In like manner, it afterwards step by step advanced up the Burrumpooter; affecting during its transit the villages situated on both its margins. From the mouth of the Hooghly to its termination in the Ganges near Moorshedabad, the same peculiarity was observable.—The shipping at the New Anchorage, at Diamond Harbour, and along the whole channel as high as Hoogly was particularly affected; and almost every village adjacent to its banks buried many of its inhabitants.—In the Bhaugulpore district the propensity was so strong, that the virus scarcely ever spread into the interior, whilst it almost depopulated the low lands near the Ganges. Again, in the Autumn of 1817, Moozufferpore, and the villages along the Gunduk river in Tirhoot, and the station of Chupra on a branch of the Ganges in Sarun, were alone visited; while at a subsequent period the disease was thence communicated along the Gogra to numerous cities in the North East quarter of our territories.—From Allahabad upwards, along the channel of the twin branches there forming a junction, until the virus was lost under the hills, it wavered so little from the line of those rivers, that hardly a town or village lying remote from their course was brought within its influence. Without going further over our old ground, let us briefly state that the same rule held yet more unexceptionably in Rajpootana; through the province of Bundlekund; and all along the Nerbudda to the numerous branches of the Chumbul." 105.

Whether there be more occult causes than what we are about to mention for this preference, we cannot tell, but little doubt can now remain upon the minds of reasonable men of both their agency and efficiency. On the banks of rivers we always find the most populous, and in parts the most filthy communities, and on the banks of rivers we always experience in its intensity the agency of malaria. That malaria, or that undefinable condition of atmosphere which the neighbourhood of rivers presents, and the contiguity of rivers generates, has much to do with the local development of cholera, we have no more doubt than of the general truth of the Newtonian system. Of the nature of that influence we are as ignorant as of the nature of attraction, or the intimate essence of force.

The Board cite instance after instance, illustrative of the effects of low, damp, and unhealthy situations in aggravating the pestilence. It is true that even the healthiest places were occasionally invaded, but they were so less frequently and infinitely less severely than the others. We need not mention instances, but such was undoubtedly the fact. Not only were cities or villages in unwholesome situations most liable to suffer from the epidemic, but the most unwholesome places of those places bore its brunt. Has it not been so in England? The cholera is usually the tenant of lanes and alleys; like the fallen favourite, it is found in "the worst inn's worst room." Its causes and seats correspond most with those of ague.

"A striking instance of the good effects of airiness in affording immunity from attacks of the disease, occurred in the great Native Jail of Alypore.—Although this building contained several thousand persons, scarcely a case appeared in it; whilst the prisoners employed at the outposts, and labouring in the sun in cleansing drains during the day, and sleeping in mud buildings at night were very sickly.—So the Native Insane Hospital built in a low swampy spot, and such parts of the shipping as lay near the slimy banks of the river, were likewise peculiarly subject to the disease, whilst on the other hand, the dry Jail of the Court of Requests, containing nearly four hundred debtors, continued nearly exempt.

On proceeding upwards we shall observe the same unerring influence of situation.—In Nuddeea, high and dry places, and upper roomed houses, were more free than low and marshy spots, with luxuriant vegetation. In the Barracks of the European Regiment at Berhampore, of twenty-four casualties, seventeen took place in the four Companies inhabiting the lower range.—This range was very damp, and had in its vicinity to the North East an extensive swamp, from which an offensive stench proceeded.—The disease shewed no variety of appearance in Rajshahy, because the town of Nattore, and almost every village in the District, are equally surrounded by ditches, full of stagnant water, and filth of every kind. But in Malda, only the villages lying in the flats near the Mahanuddee River were attacked.—In Bhaugulpore, all the lofty open country escaped, whilst those parts most subject to fevers, suffered severely, as Calcapore, Rajmahl, Peealapore, Tarapore, and Luchmunpore.—The troops and followers in the cantonment of Carringur entirely escaped; although two villages situated immediately on their boundary ditch suffered dreadfully. But the cantonments were seventy-two feet above the villages. When the disease appeared first in Tirhoot, there had been a previous unusual inundation; and the low villages near the river were alone affected.—So in Sarun, the disorder arose shortly after a branch of the Ganges had rapidly fallen, and left the town exposed to the noxious smell proceeding from its large oozy bank.—The only place, accordingly, left unaffected was the Jail; which was clean, airy, and situated in an open space at a distance from other buildings. The same favorable localities nearly saved the Tirhoot Jail.—In the dry and well ventilated cantonments of Mullhye, only three instances of the disease occurred; while the neighbouring villages, which were remarkable for their filthy and close state, were so sickly, as to be deserted by the inhabitants. So in Poorneea, the lines of the Provincial Battalion and Jail were quite exempt, when the disease was extensively fatal in the town.—In the valley of Napaul, all the villages enjoying a pure air on the slopes of the hills remained free; whilst the towns of Khatmandoo, Patun, and Bhatgoon, in the vicinity of which there was much putrid matter, and many channels of stagnant water, were severely visited.—In Benares the disease was chiefly confined to the lower classes of Natives living in wretched huts.—In like manner, at Lucknow, the cantonments, built on a dry and sandy soil, elevated somewhat above the general surface of the country, enjoyed nearly entire immunity; when the low and crowded city was greatly ravaged.—That nothing in the condition of the Sepoys themselves, was the cause of this good fortune, was very evident, both here and at Mullhye, by their becoming affected upon proceeding on guard to places within the range of the unhealthy action." 115.

We remember hearing Dr. Roderick Macleod remark in the Westminster Medical Society, that the jails had generally been the last places attacked in the town where the cholera prevailed. The Doctor is a stanch contagionist, and he accounted for the fact, or asserted fact, by supposing that the communication between the prisoners and town's-people being restricted, the disease was consequently slow in making its way into their aristocratic ranks. Where Dr. Macleod found the facts in question we do not know, and therefore we must take them as we get them; but we may venture to observe that the preceding quotation from the Report before us, supports neither them nor the inferences founded on them. This shews the danger, we had almost said absurdity, of forming or trusting to partial views.

Many instances of the apparent effects of locality are related by the

Board. We cannot find space for them, but we may state broadly that they fully prove the general law, that damp situations and crowded places were particularly obnoxious to the epidemic. Still it must not be supposed that these suffered exclusively. As a general rule, there can be no doubt that marshy spots are peculiarly prone to give rise to intermittents. Yet who does not know that ague and remittent fever are sometimes endemic, where the keenest investigation can detect no apparent cause? If this be the case with an endemic malady, how much more likely is it to be so with one which blends the characters of an endemic, epidemic, and in, perhaps, some degree contagious disease, together!

"Amidst so many proofs of peculiarities of situation influencing the epidemic, it is not intended to deny, that in the vast range which it took, there were many places, in which it not only failed in observing this rule, but even seemed to go right in the face of it. Thus, there were even whole districts, as Cawnpore and Juanpore, in which it affected all parts alike, without reference to their being high or low, damp or dry:—Others, again, in which, though it affected particular lines and villages, its liking for those parts was not to be explained on the supposition of greater general insalubrity, than that of the spots avoided by it. Lastly, there were even instances of its shewing a preference for dry and wholesome, over damp, and aguish situations: as in Allahabad, in which the lines of the Native Artillery Details, lying in the low and swampy suburbs of the city, and much exposed to putrid animal and vegetable exhalations, were alone spared; while those of the European Invalids, which stood high and dry, and all around, was largely infected with the virus. But these exceptions were comparatively few in number; and should not be allowed to affect the general conclusion, founded on the large body of affirmative evidence previously adduced; that the power and range of the epidemic, the poison being once afloat, were always increased by such causes, as experience has shewn to exercise a marked agency in the generation and dissemination of Jail, Bilious, Remittent, and Intermittent fevers!

Is the entire immunity of lofty and mountainous situations attributable merely to their being, from their greater altitude, less surrounded by those vapours, and less exposed to those extrinsic circumstances, which subjected the lower lands to the influence of the disease? Or, was the peculiar poison of the epidemic confined to the inferior strata of the atmosphere? That this was not invariably the case, was proved, by the pestilence getting over the high chain, which divides Nypaul from Tirhoot, and Munnipore from Sylhet.—But the difficulty, with which it appeared to ascend these heights, and the perfect immunity of the elevated fortresses of Rhotass, Adjeegur, and Kallinjur; of Kumaoon, the Dhoon, and the hilly parts of Rajpootana, while all around them was infected, would rather incline us to believe, that there was something in the air of elevated situations intrinsically hostile to the existence of the poison." 122.

OF THE CONTAGIOUS NATURE OF THE DISEASE.

Such is the title of the sixth section, an interesting and an important one. Let us see what was the impression on the minds of the public and of the profession, in the districts where the disease first manifested itself with a virulence which it has never since displayed. There were then no theories to be supported, no interested motives, no party spirit. Men might have been wrong in forming their opinions, but their errors would be merely those of judgment, not tugged in one way or another by the influence of the feelings or by factious, not to say sordid motives. The Board put a bold face on the matter at starting.

"If, by contagion, is meant the communication of the disorder from person to person, by means of contact, or close conversation; then, in this strict sense of the word, Cholera is certainly not contagious.

In the absence of all positive proof, such a conclusion might have been fairly drawn, from its being observed, that in no quarter of India, during the time in which it was so sadly scourged by the disorder, did its infectious nature form any part of the popular belief.—Amongst a rude and superstitious people, the unexampled mortality caused by it, was, according to the fancy of the individual, ascribed to fatality, to the agency of malignant spirits, or to the anger of an offended Deity: but it does not appear to have been once suspected, that its amount was increased, or diminished, by the free, or restrained intercourse of men. It may be said, in diminution of the weight here attached to the popular persuasion, that the opinion of the vulgar is usually founded on misconception, or guided by caprice; and is therefore of little, or no value.—This is no doubt true, in respect of subjects, either foreign to their interests, or too recondite for their understandings.—But, in matters of daily observation, and especially in those narrowly concerning the interests and safety of all, there is perhaps no fairer criterion of truth, than the common judgments of mankind.—The progress of any generally fatal disorder is exactly of this description; and accordingly we find, by looking into the histories of all the great epidemical and infectious distempers, to which the human race is subject: as the plague, small-pox, measles, and scarlet fever; that the people were never slow to discover their true nature; and ordinarily passed such judgments regarding them, as corresponded, not merely with the opinions of more learned observers, but with the truth itself.—So it is in the case of the present epidemic. The whole body of the Medical Officers in Bengal, who have had an opportunity of seeing, and remarking on the disease, without a dissenting voice, concur in declaring, that it is not contagious."* 124.

Popular opinion, however, is fallible, and the unanimous opinion of medical men should not be deemed conclusive, unless supported by facts which themselves bring conviction to a reasoning mind. Let us see then how facts bear in this particular instance. The disease could not possibly have originated in contagion, that is obvious. If evidence is to be made the foundation of induction, and when we discard that we take refuge in fancy, the disease commenced simultaneously, or nearly so, in several places. Now it is conceivable that a disease may spring up in a particular spot, and be subsequently propagated by means independent of those which produced it. But if the malady appears not in one, but in several places, it is then more consistent with the principles of ratiocination and the dictates of common sense, to imagine that the causes which gave it birth, are probably operative still in its evolution. Cholera differs from diseases which we know to be contagious in the remarkable tendency to wear itself out in a definite, and that a comparatively short time. We may select some examples of this general law.

"But, again, the whole habitudes of the disease, when once it had entered a town or camp, proved, that it was not kept up by infection. Instead of daily increasing, and being perpetuated by the very means on which it fed; it invariably ran a regular course of increase, maturity, decay, and extinction.—Thus, in the Centre Division of the Army, it began on the 7th of the month; was at its height from the 16th to the 22d; declined to the end of the month; and finally disappeared about the 2d or 3d of December. So in the Left Division of the Army, it commenced on the 10th of April; was at its full in the middle of the month; declined from the 21st; and died away before the beginning of May.—The case of the Nagpore Force is somewhat different.—The corps composing it fell at once into a medium already fully impregnated with the poison; and, without passing through the primary stage, or that of increase, immediately had the disorder in its most violent form.—The only effect of this change of circumstances, however, was to diminish the usual period of the revolution; for the disorder which began on the 31st of May, had abated previously to the 5th, and nearly disappeared soon after the 18th of June. In the Rajpootana Force, the sickly period was still shorter.—The disease appeared on the 14th of September; and continued violent to the 20th; after which it gradually declined till the 1st of October, when it wholly disappeared. Lastly, in the Hansi Division, it observed the same regularity of course; beginning on the 6th of August, increasing in severity for a time, and gradually becoming extinct towards the end of the month." 127.

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* "To this unanimity of conviction there was originally one exception; but, from more extended experience that individual has since modified his opinion."

In answer to this it has been urged, that if cholera or any other pestilence were to proceed till no more subjects were left for it, the world would be depopulated. The objection is specious but unsound. It has been wisely ordained by the omnipotent and omniscient Creator, that all men should not be liable to all maladies—that one should be insusceptible of small-pox, another of scarlet fever, another of plague, and so on. If this were not so, undoubtedly the world would be soon depopulated. But still a large portion of mankind do seem to be susceptible of those diseases, which the common experience of common men has decided to be infectious or contagious, or both. Setting aside the effects of vaccination, we find this the case with regard to small-pox, measles, scarlet fever, nay even to the plague. The tendency of these maladies is to attack, and so far as their virulence extends, to destroy the many individuals who can suffer from their poison. But accident or design, (and we are of that sect who think accident acting beneficially and often, is probably design) have interposed barriers to the extension of these evils, and checked them in their pernicious career. Thus vaccination counteracts the diffusion of small-pox, diminution of temperature that of plague. Take away these counteracting agents, and we do not observe in the diseases thus abandoned to themselves a tendency to run through a brief career, exhibiting in the limited space of a fortnight, or a month, a manifest series of changes, a period of increase, an acmé, and a rapid decline. Plague exhibits such stages it is true, but plague appears in a certain temperature, and by a very low or very high temperature it is extinguished. It is certain that this law of cholera is not absolutely conclusive against its contagiousness; but, inasmuch as it constitutes a most essential difference between cholera and diseases manifestly contagious, it serves to destroy the analogy between them, and makes us hesitate in imagining that their propagation can be governed by the same laws.

In contagious diseases mankind seem to have hit upon some sort of quarantine by common and universal consent. In the present instance, no such consent has been observed, and in India quarantine was never deemed necessary. Again, in contagious diseases quarantine has on the whole displayed some powers in preventing the importation of the disease against which it was directed. Against cholera, we need hardly say that it has proved entirely impotent and futile. Here again is a striking difference between cholera and diseases avowedly contagious.

In contagious diseases, the great bulk of the medical men who witnessed them, were forced to bow, whatever might be their inclination, to the majesty of truth; they were compelled, in short, to acknowledge the force of facts in favour of their contagiousness. How different the case has been with cholera. Where the disease was not, the contagionists have usually out-numbered their opponents, but so soon as an opportunity of personal observation and experience was afforded, round went the wind, and the anti-contagionists became the overwhelming majority. This has been the case in Europe, and very remarkably so in this country. In India we find the same thing take place, with this difference only, that as few contagionists ever existed, so very few could possibly be converted. Let us now look at some of the circumstances which produced so deep and so universal a conviction of the non-contagiousness of the epidemic on the part of our Indian brethren.

"The opinion of the medical observer was, in all situations, founded upon his noticing the following facts.—In his attendance upon patients labouring under the disease, he did not find himself, or his assistants, more liable to be attacked by it, than such persons, as had no communication with the infected.*—He could not attribute his escape to the effect of precaution, for he took none; nor to the limited nature of his intercourse with his patients; for the disorder, and the remedies employed in it, were such, that he was obliged to be constantly handling the body of the sufferer, and could not with safety leave his bedside, during the height of the attack.—It might even be said, that in every case the patient and he breathed upon one another: so that, had the effluvium exhaled from the lungs or skin of the patient, been truly infectious, even in the slightest degree, he could have had no chance of escaping.—Next he saw, that where one member of a family was ill, the others were not more liable to get the disease, than an equal number of individuals picked out from the general body of the community.—This must be taken with some allowance.—Sometimes two or more members of one family were seized; but in such cases, they were generally all taken ill together; were living in the same unwholesome situation; and had been previously exposed to some manifestly strong exciting cause: as the eating of noxious food; sudden vicissitudes of temperature; and the like.—In the rare instances, in which one fell ill at some distance of time after another, if we do not chuse to consider the concurrence as purely accidental, we shall be at no difficulty to explain it, upon remembering the depressing influence of fatigue, fear, sympathy, and grief—all powerful predisposing causes.†

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* "This is a very striking fact. From a medical list, consisting of between two hundred and fifty and three hundred individuals, most of whom saw the disease largely, only three persons were attacked, and one death only occurred. —The fatal case took place at Barrackpore, a station very little visited by the epidemic; the two others, which were not severe, occurred in the Centre Division of the Army. There too, one of the Surgeons of His Majesty's Corps was cut off; the only Medical Officer belonging to the King's Service known to have been affected.—In Nagpore the Medical Staff remained for several days, night and day in the hospitals, and yet all escaped."

† "A very striking example of the noncommunicability of the disease by contact was afforded in Colonel Gardner's Irregular Horse, which was attacked at Khassgunj in the Doab in August 1818. No two men were seized in the same

In camps, where the general body was more compact, and the sick more numerous, and crowded in smaller space, there was still ampler opportunity of confirming the truth of these observations. In no one instance were the dooley bearers, native compounders, or any other part of the large hospital establishments then necessarily kept up,—although all were often so hard worked as to be scarcely able to stand from fatigue—more sickly than other descriptions of followers; nor did the soldiers, who constantly flocked to the hospitals, to see and watch over their sick comrades, appear by that means, to be more susceptible than others, of the disease.—Nor were those patients, who were ill of other disorders, although always surrounded by persons in every stage of Cholera, therefore more liable to be attacked; unless perhaps an exception be made in favor of convalescents: a class of persons always, from debility, much predisposed to fall into fresh disease. In the Centre Division of the Army all this was particularly remarked; and during the week in which the Epidemic raged with so much fury; when the camp was a sick ward, and every tent was filled, or surrounded with the dead and dying; the Officers suffered comparatively very little. From a number that could hardly have fallen short of three hundred, only five or six deaths occurred. And it should be remembered, that at this time Officers of all descriptions were equally exposed with the Medical men; for the sick had become so numerous, that even the services of all were insufficient to tend them with proper care, and duly administer the requisite remedies." 132.

When the epidemic has attacked one member of a family, it appears to us that it has generally evinced a disposition to attack one or more of the rest. To this rule there have been numerous and striking exceptions; such, indeed, as have induced observant men to assert, that no such disposition exists. But, granting the fact to be as we have stated it, we cannot regard it as furnishing any thing like conclusive evidence in favour of contagion, and for these reasons:—First, when one member of a family has been attacked, the others have usually suffered in such rapid succession, as to lead us to suspect some general cause acting upon the whole; secondly, supposing a disease to be both epidemic and endemic, which cholera unquestionably is, all the individuals of a family are exposed to the same general and partial influences which acted on the one, and, therefore, are more likely, on these accounts, to be attacked than other individuals or other families; thirdly, all use the same food, and are nearly similarly circumstanced in regard to clothing, lodging, habit of body, and predisposing causes; fourthly, fear, alarm, depression, are perhaps the most powerful of all predisponents or excitants of cholera, and to these great agencies families are particularly open, when one has already been cut off before their eyes. These considerations should make men hesitate, before they jump to the conclusion that contagion has been proved, because several members of a family have suffered from the epidemic. When common catarrh is prevalent, that is, epidemic, practitioners, nay, the vulgar, know that one in a family is seldom attacked

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hut, although from twenty to thirty troopers slept in each. A case exactly the opposite of this occurred in Lord Hastings' camp at Gorruckpore. A Sepoy died of the Pestilence. Five of the Corps, who had shewn no signs of illness, were employed to cary the body to the grave. They were all seized with the disorder during the ensuing night; and all died. This no doubt looks very suspicious; but then we know nothing of the concomitant circumstances; which as in other instances of apparently dubious origin, might have been sufficient to do away every suspicion of the agency of Contagion."

alone. So it is with every disorder in which epidemic or endemic agencies exert an influence; indeed it has been less the case with cholera than might reasonably have been anticipated. Where several in a family have been attacked in England, they have almost universally been crowded and destitute; whilst, on the other hand, the instances, and numerous they are, to the contrary, have been in places where cleanliness and ventilation were more attended to, and such abject poverty has not existed. For the same reasons, we imagine, this extension of the disease was less remarked in the military hospitals and in camp, than amongst the crowded and miserable villages and filthier suburbs of towns. In England, also, the epidemic has attacked several members of a family in the lanes and alleys of London, Sunderland, and Newcastle. But wherever persons in easy circumstances have been the victims, it has *not* spread among their friends and relatives. This was the case in the neighbourhood of Haddington, where one or two servants were affected—at Hillhead, near Kirkintilloch—in London, in the instance of Lady Wyndham, Lord Holland's servant, and on other occasions. These remarks are, we think, a sufficient answer to those, who rest their proof of contagion on the circumstance of several in a family being frequently infected. It is on such proofs as these that the Board of Health of Ely have founded their declaration, that cholera is in some degree contagious. That this is the case, under certain circumstances, we ourselves believe, and have always maintained; but we think that it is neither fair, nor safe, nor philosophical, to bottom that belief, still less to found any public declaration on this particular fact. Nothing is so dangerous as forming a sweeping opinion on one circumstance. To do this, is to abandon the advantages derived from our powers of reasoning and comparison. The Bengal Board relate several instances of striking immunity of particular bodies of men, in the midst of the disorder, or having the disorder in the midst of them.

"From the centre Division a few days previously to the breaking out of the Epidemic, a small force, consisting of 4 troops of the 7th Regiment Native Cavalry, 3 Light Companies of Sepoys, and the Dromedary Corps, was detached on particular service in the neighbourhood. A short time afterwards, the remaining squadron of the Corps of Cavalry was sent as a reinforcement from the great camp, in which the disease had then got head. It carried the virus along with it; and actually lost several men, after its junction with the foregoing detachment; which nevertheless remained perfectly healthy throughout.

But, there is yet a still stronger instance of the possibility of a diseased body joining a healthy one, without thereby communicating the infection to it. On the morning of the 11th of May, 1818, a detachment of 90 men of the 1st Battalion 26th Native Infantry marched from an inferior post, to join the main body of troops then encamped at Saugor. After an ordinary march, it halted in perfect health, half way; under shelter of a few trees on the banks of a small lake; situated in the midst of an open space, about three miles in circuit, and surrounded by low, woody hills. The whole remained well until the fall of night; when Cholera broke out amongst them. The first man was taken ill at midnight, and died in half an hour. Several others fell sick within the next few hours; and before sun-rise, twenty out of the ninety were overtaken by the disease. Although the Saugor camp was distant only five or six miles, the detachment was too weak to move without assistance. The sick of the Sepoys and followers were therefore carried in, in carts and doolies sent from the main body; but before 11, A.M. when they got to their ground, five were already dead, and two others moribund. Next morning, a man of the same party was seized in the act of scouring his accoutrements; immediately became insensible; and expired in a few minutes. During the three succeeding days, several others were taken ill; and before the end of the week, of the whole Detachment, there was not a single man, but was sent to the hospital, labouring under Cholera, or other modifications of bowel-complaints. The men of this party mixed promiscuously with those of the Saugor Troops; and yet of the latter not one individual got the disease.

An instance of the same kind occurred in the Hansi Division; except that here the party, which escaped, went into the infected medium, instead of the pestilence being carried amongst them. When the disease was at the worst with the troops composing this Force, Casement's corps of Irregular Horse entered the camp, and continued with the Division during the remainder of the service: yet it did not at all suffer.

It may be supposed, that in these cases, the persons who escaped, owed their immunity to their not having been long enough exposed to the poisonous matter; or to some incidental peculiarity in their condition, for the time being. But, then, we shall find, that the same irregularity obtained, where those remaining unaffected were for a long period surrounded by the supposed infectious atmosphere; and in all respects similarly situated with others, who suffered severely. Of the latter, a remarkable example was afforded in the Left Division of the Army, whilst under the influence of the disease. Here the 7th Regiment of Cavalry, and the 2d Battalion 13th Regiment of Native Infantry remained entirely exempt;* and the 2nd Battalion 1st Regiment had only three mild cases: while the 1st Battalion 14th, and the 2nd Battalion 28th Regiments were greatly affected. The same partiality of affection here took place among different classes and descriptions of troops.—The Goolundaz, gun lascars, and miners were mildly affected; while the pioneers, drivers, &c. who had undergone the same vicissitudes of weather, and fatigue, were not at all touched.—Some corps lost more than a hundred, others only three or four men. This could not arise from separation, or difference of situation and diet; for all used the same food; and there was constant intercourse, and daily change of ground.—The same observation may be extended to the Rajpootana Force, of which the right suffered more than the left portion.—In Furruckabad Lines, the Jail and the Artillery Barracks, the former containing six or seven hundred prisoners, subject to great privations, and daily worked in the sun upon the roads, and the latter inhabited by 100 Europeans and 250 Natives of the 12-pounder Experimental Brigade, had not a single case; whilst the Levy Corps suffered severely. The case of the Native Artillery Lines at Allahabad, which escaped, although in the very centre of the pestilence, has been already alluded to.—But at this station, there was something yet more to our purpose. For of 400 Supernumerary Invalids, assembled there for examination by the annual Invaliding Committee, not a man was affected, although they were living, under perfect similarity of circumstances, in the Lines of the Regular Invalid Battalion, the men of which, in fourteen days, had 50, of 680 their total number, sick of the disease.—So, while the disease raged virulently at Banda, not a man belonging to the 2nd Battalion 3d Native Infantry stationed there was affected.—At Hutta, again, a healthy town on the banks of the Sonar in Bundlekund, the Epidemic committed such ravages, that the inhabitants fled, and took refuge in the neighbouring villages; and so virulent was the poison, that three Sepoys and seven camp followers of the 2nd Battalion 1st Regiment were seized, merely on that Corps marching through the place.—And yet, the disease never appeared amongst a Company of Sepoys, or their followers, then in the fort, which was divided from the town only by a broad street.—What here served to skreen these men from infection? Certainly no suspension of intercourse between the town and fort; for this always remained free; much less superior salubrity of situation, for the fort was small, and crowded with buildings, and the town high and open.—Thus too, whilst the disease raged in Saugor, and in the lines of the 1st Battalion 26th Native Infantry about a mile and a half distant; not a case occurred in the fort in the centre of the town, which was then garrisoned by 200 men of the 2d Battalion 1st Regiment.—In like manner, in Kotah, three Companies stationed in the fort escaped entirely; whilst one hundred persons were daily perishing in the town.—And at Muhedpore, when the Epidemic prevailed in the vicinity, and was daily attacking a detachment of Bengal troops, consisting of part of the 1st Battalion 6th Regiment Native Infantry, two *Rissalus* of Skinner's Horse, and 1500 Camp followers, it entirely spared a body of 500 of Holkar's Reformed Horse; although the two camps closely adjoined, and a man, who had been sent in from the Bengal Division after getting the disease, went through every period of it amongst the healthy Mahrattas. If the virus were capable of being procreated by Contagion, surely the poisonous particles emanating from the body of this infected person, would have been sufficient to support and diffuse it all around.—For, this body, having an infected person in the midst of it, was, except in respect of numbers, then in the precise situation of the larger Divisions of the Army; in which the disease always began with one or two unconnected cases; slowly and gradually creeping on to inveteracy.—With it, all that was wanting, was the peculiar disposition to take on, and keep up the diseased action; and this being absent, the supply of vitiated matter, which, in small-pox and other distempers, confessedly contagious, would have sufficed for its continuance, proved quite innoxious.

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* "It is true, this and other instances to be cited, may be in some measure accounted for, by the Corps having earned exemption by previous exposure to the influence of the disease, whilst forming part of Colonel Philpot's Detachment from the Centre Division."

We should fall into endless repetition, if we went on citing the great variety of evidence, which might be drawn in support of the doctrine of non-contagion, from the general progress of the disease, through the districts and towns successively visited by it.* Let the reader only call to mind the innumerable detached spots, which remained free, when all around was sickly; and remember, that in no single case, was any restraint placed, on free intercourse between the healthy and diseased; and he must come to the conclusion, that the Epidemic was totally independent of the common laws of Contagion." 139.

As we do not wish to advocate one side of this question merely, we shall mention the facts, supposed to be favourable to the idea of contagion, which are mentioned by the Board.

"But as it cannot be denied, that there were some circumstances in the manner in which the disease arose both with the Hansi and Centre Divisions, militating against this opinion, let us, before leaving this part of the subject, examine them a little more narrowly.

The persuasion of all the Medical Staff present with the Hansi Force, regarding the mode in which it received the infection, has been already quoted. It consisted in the belief, that it was communicated by the Meerut Detachment, who got it on passing through Delhi, at the time of their crossing the Jumna.—

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* "One case is too remarkable to be passed over. Of the cluster of islands lying near the main land, as the Ganges discharges itself into the Bay of Bengal, Sundeep, a large and populous place, remained quite free; whilst those of Deccan Shahbaspore, Huttiah, and Bomney were ravaged. There was nevertheless constant and great intercourse between all." 138.

The opinion of so many intelligent persons, is no doubt entitled to much respect; and would entirely set the question of Contagion, in that sense of the word in which by infection is meant the communication of the disease from one large body to another large body, at rest; were it not counterbalanced by some circumstances of an opposite tendency.—If we believe, as stated by one gentleman, that before the junction of this detachment, the disease had already found its way to several places intermediate between Delhi and Hansi, and Delhi and Kurnaul, we can be at no loss to account for its rise in Camp, without resorting to a belief in Contagion.—For, the Camp presented to the Epidemic exactly that face of things, which we know to have been always particularly affected by it; namely, a large body of men collected within a narrow space.—We are accordingly told, that previously to the junction of the Meerut Detachment, one or two cases had actually occurred amongst the Camp followers.—Admitting this to have been the case, the certain consequence of the great additional stock of pestilential matter imported from Delhi, would be to aggravate, and widely diffuse the disorder; and the whole mischief might very naturally be placed to the account of the new comers, by persons unaware of its having begun to operate, though in a less degree, previously to their arrival.—However this might have been, there were no grounds for supposing, that, even here, the disease was communicable from person to person; and the medical Officers are unanimously of opinion, that it was certainly not so.

The case of the Central Division is encompassed with still greater difficulties. The main body of this Division crossed the Jumna at Shergurh on the 28th October; and after one or two days halt, marched in a North Westerly direction, towards Loharee, Nuddeeka-gaon, and Terayt.—A detachment, composed of 5 Companies of the 2nd Battalion 13th Regiment Native Infantry, and two Companies of Pioneers, was left behind, in charge of the bridge of boats thrown over the Jumna.—It was here, that the Epidemic first shewed itself. A few cases appeared as early as the 2nd of November, in some troops then passing over; but on the 5th, the disease became common in the Detachment on guard.—On the 9th, this Detachment joined the main body of the Army at Terayt; and it is declared by some of the Medical Officers then on the spot, that during the two immediately subsequent days, the disorder was first observed in Camp.—In support of the opinion, that this Detachment brought the disease into the previously healthy Division, it is added, that the 2d Battalion of the 13th Regiment was brigaded to the left of the 1st Battalion 24th Regiment Native Infantry, and the 1st Battalion of the 24th to the left of the 2nd Battalion 11th Native Infantry; and that the 24th was attacked before the 11th. Lastly, in further proof of the communicativeness of the virus, it is affirmed, that the previously healthy villages, and among other places the town of Sumpter, got the infection from the Division.—This is the amount of facts in favor of the disease being capable of transmission by a large body from an infected, to a distant salubrious atmosphere; and thus communicable by contaminated, to healthy individuals.

It must be confessed, that this evidence is very strong, and would prove quite conclusive of the matter, were it to remain unshaken. But, unfortunately for the hypothesis meant to be established by it, there is hardly one item of it, that is not opposed by circumstances of a contrary tendency.—And, first with regard to the appearance of the disease in the main body of the Division, the testimony of different individuals, is so much at variance, as to be quite irreconcileable. Of twelve Medical Officers, who have given replies to the queries on this point, one states the disorder to have broken out on the 6th; two on the 7th; one on the 8th; two on the 9th; one on the 10th; four on the 11th; and one on the 12th. This discrepancy, however great, is easily explicable, when the insidious nature of the disease at its first onset is taken into account; and when it is recollected, that the sphere of each individual's observation, would hardly go beyond the Battalion, immediately under his charge.—But, how are we to reconcile the assertion of its having appeared on the 6th, 7th, 8th, or even the 9th, with the assumed hypothesis of infection from the Shergurt Detachment.

In like manner, the fact of the Division communicating the virus to the villages lying on its route from Terayt to the Betwah, is equally disputed. It is held by some, that those villages were not at all affected; by others, that they had the disease independently of any intercourse with the Division; and by a third party, that the latter invariably carried the infection along with it.—One gentleman, having several times sent his Native assistants into the district, was uniformly told, that the pestilence was not amongst them.* Another declares, that all the neighbourhood was sickly: the dry and clean town of Sumpter, equally with the low and filthy village of Nuddeegaon. A third, that the Army having on the 13th marched from Terayt to Talgong, the inhabitants of the latter place got the disease the following morning; and a fourth, that Sileia was first affected, on being entered by the Division on the 19th." 143.

In respect to the Meerut detachment communicating the disease to the Hansi force, it is quite ridiculous, when it is admitted that the camp of the latter " presented to the epidemic exactly that face of things which we know to have been always particularly affected by it—*a large body of men collected within a narrow space.*" Add to this, that some cases had occurred *before* the Meerut division joined the camp of Hansi. Every person of enlightened views will see that the congregation of troops did not bring " additional stock of pestilential matter" from Delhi; but produced additional pabulum for the epidemic or endemic cause to work upon. As to the centre division, the accounts contradict each other; and if they were all accordant, it amounts only to the exploded and fallacious doctrine of *post hoc ergo propter hoc.* Two days after a detachment joins an army, the disease appears in that army! How often has this kind of argument been rendered futile in Europe during the present epidemic!

It has been observed in this country that persons coming to visit their relatives or friends dead or dying from the malady, have in several instances been themselves cut off. To a superficial examiner this might appear strong evidence in favour of contagion. But then it must be remembered, that these persons expose themselves to the epidemic and endemic influence, whatever it may be; and, in the latter instance, have superadded to this the predisposing causes of fear, fatigue, dejection. If a person, after visiting a place where cholera is, were not only to have the disease himself, but if, on his return, his fellow townsmen also were infected, then indeed all must own that a case in favour of contagion was made out. But how seldom has this been done? under our own eyes, never. Many assertions of this kind have been made, but when properly sifted, they have proved mere dust, fitter to blind than to clear our view.

" Under such extreme contrariety of testimony, it would be vain to attempt drawing any certain conclusion.—This much, however, may be affirmed, from a review of the whole progress of the epidemic in this quarter, that the infectious medium, in whatever it consisted, was confined within a very circumscribed circle;

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* " Col. Philpot's official reports state positively, that the thinly scattered villages on the route of his march remained unaffected; while his detachment was suffering very severely."

and was very slowly extended to healthy parts of the atmosphere.—If, setting aside the circumstances militating against it, we take it for granted, that the infection was truly received by the Centre and Hansi Divisions from the Detachments above-mentioned, we must believe, that the disorder, although not communicable by contact from person to person, was so from one large body to another large body; and that, wherever the poison got head amongst a number of men, it assumed some new quality, so as, when mixed with the atmosphere, to become infectious.—What constituted this additional quality, we cannot pretend to determine; but, in support of its existence, we may quote the predilection of the epidemic for cities and camps; the infection of the Left Division and the Nagpore, and Meerut Troops, immediately after entering into the diseased medium at Jubbulpore, Nagpore, and Delhi, and the similar case of the troops and followers in attendance upon the Governor General, being attacked shortly after communicating with an infected village, in the Gorruckpore district.—To the same account may be placed, the progressive march of the disorder from one part of an infected place to another; as in the Centre and Hansi Divisions; and more particularly the Rajpootana Force, in which the virus seemed to be regularly propagated from Corps to Corps.* In some instances, the suffering body would appear to have sickened immediately upon coming into the poisonous medium; as was the case with the Nagpore Troops, who were affected on the very day in which they encamped at the infected village of Gaongong.—But, more frequently one or two days would seem to have been requisite to bring the virus into action. Thus the Meerut Detachment entered Delhi on the 29th, and was not affected till the 31st; thus too, the Hansi Troops had not the disease till the 6th, the day after the junction of that Detachment.—Again, by those abetting the opinion of the disorder being communicated to the Centre Division by the Shergur Detachment, it is stated that the first cases occurred on the 11th, two days after its junction. Lastly, the followers of the troops in personal attendance upon the Governor General in April, first suffered on the 23d, three days after encamping near an infected village." 146.

This closes the section on contagion, and with it is almost terminated this article. With regard to contagion, we may say, as the Board say on another occasion, that the proofs in favour of it in fact amount to nothing, certainly to nothing satisfactory or decisive. That they frequently are calculated to breed suspicion, we freely allow, and they check the precipitancy of those who unhesitatingly declare that cholera is under no circumstances contagious. That contagion can be generated under certain conditions, we firmly believe; but what these are, we do not precisely know. That filth and crowding can call it into life, is probable enough, but whether other circumstances and what, can do the same, we feel ourselves unable to determine. Perhaps at some future period, when party spirit has declined, when more facts are before the world, and a calmer and more impartial consideration of them is adopted, the obscurity that veils this subject may be dispelled, or at all events diminished. Till then we adhere to contingent contagion, the safest, most philosophic tenet, as squaring with most facts, and now the most prevailing opinion.

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* "The line of this Force faced nearly North and by East. The troops were arranged in the following order, commencing from the left. The 1st Battalion 28th Native Infantry: 6th and 7th Companies Pioneers; Goolundaz and Gun Lascars; the Park in the Centre; 5 Companies 1st Battalion European Artillery; 1st Battalion 27th Native Infantry; Squadron 2d Regiment Cavalry; 2d Local Cavalry; in the rear of the Park were 415 Ordnance Drivers, with lines of Officers' tents intervening. The 1st Battalion 28th and Goolundaz were attacked on the 14th September; on the 15th a few cases occurred amongst the Pioneers and Lascars; but among them and the Gunner Drivers they were not numerous till the 19th. On the 18th the Squadron of Cavalry was attacked; and on the 20th, the Local Cavalry, and 1st Battalion 27th N. I. It must, however, be remembered, that the ground was drier on the right, than on the left of the line."

Passing over the section on the predisposing and exciting causes, which contains nothing remarkable, we shall linger for a moment at that which tells of the mortality caused by the disease in Bengal. It appears that the accounts of the mortality in the towns and villages are not to be relied on. In addition to those sources of delusion which European communities have displayed, there were many of native growth, which we need not stop to mention. We shall confine the few extracts we intend to make, to those which give us information which deserves to be depended on. It appears that, in Bengal, males were liable in a greater proportion than females, whilst children and infants almost escaped. In this country, women have suffered more than men, and children in a greater proportion than in India. In Paris it has been different. After displaying the reputed and computed mortality in different cities and districts of Bengal, a mortality that makes a very formidable appearance, being formed of liberal allowances of sums of 10,000, 8,000, and so on, the Board state the ascertained loss in the army. Even here it is probable than inaccuracies have occurred, but they are not to be looked on as invalidating the returns.

"Let us next examine the amount of the loss sustained in the different Corps of the Army.—In the Centre Division the mortality was, on conjecture, variously calculated at five, eight, and twelve thousand.—The truth is, that in all cases, it is next to impossible to compute correctly the exact amount of the vast variety of persons, constituting the class of Camp followers with an Indian Army; and amid the confusion and desertion occurring in the Centre Division during the sickly period, even had its original strength in numbers been known, the real extent of its loss could hardly have been ascertained. The mortality was undoubtedly greatest from the 14th to the 19th of November; and it was calculated, that, at the very least, five thousand of all classes perished during these five days. The armed force consisted of 3,500 Europeans, and 8,000 Natives. Of the former, 230, and of the latter 534, died. The average loss of each Battalion was computed at 50 men; but this is mere conjecture, as no accurate returns were obtained. In some Corps the number attacked was very great. Thus the 1st Battalion 8th Native Infantry had 350 seizures, and 40 deaths; and the 3d Regiment Cavalry 154, and 18 deaths. In the 2d Battalion 1st Regiment Native Infantry, 48 Sepoys, and 25 followers died, between the 10th and 26th. From the 2d Battalion 11th Regiment Native Infantry, 268 cases were admitted, of whom 43 died.—In the Rocket Troop, 27 Europeans, of whom one only died; and 87 Natives, of whom 18 died. Of 2,000 of all classes, attached to the King's 67th Regiment of Foot, 90 died. The mortality amongst a given number seized, varied, according to the difference in the period, and in the class of the individuals attacked. From the 10th to the 15th, it did not exceed one in eight; and was then chiefly confined to the bearers and other descriptions of Camp followers; from the 15th to the 19th, it increased to one in three and a half, and then occurred, principally amongst the Europeans and Sepoys; and from the 22d, to the 30th, it decreased greatly. We have said, that the disease was at its height on the 18th. Of the 2d Battalion 11th Native Infantry, 56 Sepoys were admitted on that day; from 20 to 30 on each succeeding day to the 22d, and from thence to the end of the month only 20 in all. Of the European Artillery, the average of deaths was one fourth; of Golundaz, rather more than a fifth; of gun lascars, less than a fifth; of drivers a third; and of Magazine men, a half. Of the Natives, the two former classes are chiefly Moossulmans, the two latter Hindoos. The great mortality amongst Europeans may be ascribed to their constitutions having been previously debilitated by irregular modes of living, and uncongenial climate; to the comparative severity of the attack, and greater struggle in a plethoric habit and muscular frame. Women were equally with men obnoxious to the disease; and died in a like proportion. Thus of 268 females attacked, 43, or one-sixth died. It was observed, that concubines and prostitutes suffered in a larger proportion than other descriptions of women: probably from their dissipated habits, and precarious mode of life.

The mortality in the Hansi Force was very inconsiderable. Not more than 271 persons in all were seized; of whom 51, or one in five and a half perished. Of these a large proportion was Sepoys; of whom 126 were attacked, and 27, or rather more than a fifth, died. The majority of deaths occurred in the early part of the disease; when it was more virulent than afterwards. Six Europeans only were attacked, of whom one died.

In the Rajpootana Force, which in fighting men and followers amounted perhaps to 15,000, the mortality was greater. The armed part of the Force consisted of 96 Europeans, (Officers not included) and 4,100 Natives; of whom 292 were admitted, and 122, nearly one half, died. The different Corps were variously affected. Of the European Artillery, only 3 were seized: all of whom recovered. Of the Goolundaz 240 in number, 6 sickened, and 2 died; of 250 Gun lascars, 21, of whom 12 died; of 392 Ordnance Drivers, 44, of whom 17 died; of 294 Pioneers, 53, of whom 23 died: Of the 2d Cavalry, 600 strong, 8, of whom 2 died; of the 2d Local Cavalry, 720 strong, 4, of whom 2 died; of 5 Companies 1st Battalion 27th Regiment, 18, of whom 7 died; of the 1st Battalion 28th Regiment, 944 strong, 135, of whom 57 died; and of 2d Battalion 19th Regiment, 887 strong, 3, of whom none died. Of 75 Camp followers who took medicine, 15 died. Here Europeans were slightly affected, and the lower classes suffered most. This was not uniformly the case; for according to one statement, the Sepoys suffered more than the camp followers in the 1st Battalion 28th Regiment. By this account, the strength of the Battalion is stated at 1,004; of whom fell ill 144, and died 60; whilst of 513 Camp followers, 35 only were seized, and 14 died: the casualties among the Sepoys being in double proportion to those of the followers. The Battalion consisted of 878 Hindoos, and 126 Mussulmen; of the former, three fifths were Bramins and Rajpoots; the remainder of low cast—57 Bramins were taken ill, and 30 died; Rajpoots, 47, and 16 died; low casts, 21, and 9 died: or of the whole affected, a little more than one half. Of the Mahometans, 19 were seized, and 5, or one fourth, died. So that the disease was more fatal to Bramins than to Rajpoots; to Rajpoots than to the lower casts; and to Mussulmans the least so of all. It was most destructive from the 14th to the 22d September; of 108 admitted from this Battalion in the 1st week of its visit, 51 died; after which the average was about one fourth.

In the Left Division, of 8,500 fighting men, 125 cases occurred, of whom 49, more than a third, died; 30 in April, 18 in May, and 1 in June. Here the disease equally attacked Hindoos and Mussulmans of all orders: Drivers, Lascars, Bearers, Grooms, and Grasscutters, not being more liable than the regular troops. Children were peculiarly exempt; females not. The mortality was greatest from the 10th to the 21st April.

In the Nagpore Force, from the 31st May to the 15th June, of about 4,000 regular troops, 13 Europeans were seized, of whom 6 died; 211 Sepoys, of whom 29, or one seventh, died. The mortality was greatest, perhaps two thirds, at first. The Camp followers were affected very severely; grooms more so than any others.—The Artillery lascars, drivers, and water-carriers were most exempt. Women were affected equally with men; and children at the breast were not safe from its attacks.

From the whole of the foregoing statements, we think it may perhaps be inferred: 1st. That the sum total of the mortality occasioned by the epidemic fell far short of the rate assigned to it by the voice of the public during the season of alarm. 2d. That the mortality was proportionately much greater, among large and dense, than among small and dispersed bodies of men. 3d. That in a given place, it was generally greater in the commencement, and middle, than towards the termination of the disorder. 4th. That when unlimited by the intervention of remedial means, it generally amounted to one half, and sometimes to two thirds of the seizures. 5th. That where medical aid was duly exhibited, it rarely amounted to one third, and was generally as low as one fifth of the attacked. 6th. That men were generally more susceptible than women; and that infants and children were nearly exempt." 184.

A section is dedicated to the description of some peculiarities of the disease. Of these peculiarities we shall select only the most peculiar, for our limits are already overstepped. It has been believed by many, that during its prevalence, cholera swallowed up all other diseases and reigned sole and despotic. This was not the case in Bengal, other complaints proceeding during its prevalence with little, if any, diminution or alteration. Relapses occasionally occurred during the progress of convalescence, but, after recovery was complete, instances of a second seizure were very uncommon indeed, so much so, as fully to establish the truth of the general rule to the contrary.

"Another curious circumstance in the economy of the disease, was, that, not only were persons, who had once undergone its attack, free from its further assaults; but even individuals, and bodies of men, who having come within its pestilential influence, had escaped unaffected, were nevertheless much less obnoxious to its future visits, than those who had not before been exposed to the virus. In other words a village, which was visited by the Epidemic during the first year of its prevalence, would, on the disease re-appearing in that part of the country, be much less likely to suffer, than another village, which had not before been affected; and an individual going from the former into the infected air of the latter, would have a better chance of immunity, than its inhabitants, who had not undergone the previous seasoning. This was the case, to a greater or less degree, in every part of the Provinces; in which it was generally remarked, that the Epidemic, on its recurrence, either did not at all revisit the places formerly affected, or only in a much lighter manner, than those, to which it was yet a stranger. In Tirhoot, particularly, in which the Epidemic twice appeared at two distant periods, the truth of this observation was strikingly illustrated; since, according to the information of a very intelligent observer, not a single instance occurred, of the disease revisiting the same place, throughout the whole extent of the district.

But it is in the different Divisions of the Army, the bodies composing which long remain under the eye of the same Medical Officers, that we should expect to find the existence of this law most clearly established. It is here, accordingly, that we have the best examples of its reality. Thus in the Jubbulpore Force, the 7th Regiment of Cavalry, and 2nd Battalion 13th Native Infantry, which Corps had suffered severely in November with the Centre Division, and at the Bridge of Boats, remained quite exempt. Thus, too, the 2nd Battalion 19th, which was violently affected by the disease in August, had only three slight cases in September; when the other corps of the Rajpootana force were so roughly visited. But the best illustrations are to be found in the Centre Division. When this force broke up after the termination of the campaign, His Majesty's 24th Regiment of Dragoons, and 87th Regiment of Foot, and the 1st Battalion 8th Regiment Native Infantry, marched to Cawnpore; where they were stationed in April and May, when the city and cantonment were suffering from the disease. At this time the 24th Dragoons remained quite free; His Majesty's 87th had two slight cases, among the recruits who had not been with the Centre Division, and no death; and the 1st Battalion 8th Regiment N. I. had, according to one statement, no case, according to another, one only, and according to a third, three or four, all slight attacks. The situation of the latter Corps was such, as to give additional proof of the immunity of bodies previously exposed not being accidental. For it so happened, that this Battalion was placed right between the 2nd Battalion 15th N. I. and Craigie's Levies; both of which suffered severely, as not having earned the same means of protection. Camp followers of all descriptions were equally exempt; and one person only, an European Officer, who had been with the Centre Division, fell a victim to the disorder. In like manner, the 2nd Battalion 25th Regiment Native Infantry, which again fell in with the disease in April, whilst marching from the Tiraee for Lucknow by Gorruckpore, then suffered comparatively little. It had indeed 25 cases and 5 deaths; but of these only one was a case of relapse or recurrence, and even in it the symptoms of both attacks were very mild. But a still more extraordinary instance occurred in Lord Hastings' camp, during the march to Gorruckpore, towards the latter part of the same month. The disease here first broke out among the followers of a gentleman, who had just joined the party; and in a few days attacked between 50 and 60, out of 400, chiefly of the class of bearers. It next got among the servants of several Gentlemen in the Civil Service then in attendance upon the Governor General; and to the period of its decline, was confined to such persons, as had not been with the Centre Division. This could not be explained on any difference of situation; for the party daily changed ground, and the new comers were mixed promiscuously with those, who had been previously exposed to infecion. Nay, it further appears, that after attacking the first party, the disease made a long stretch, and next shewed itself amongst other persons, not yet seasoned, in the opposite end of the line: leaving all between untouched. If any other proofs were necessary, we might cite the case of the 2nd Battalion 3d Regiment, the greater part of which, having had the disease at Shergurh, were not at all affected, although stationed at Banda, when the town suffered severely. But enough, we think, has been already said, to shew, that the human frame, on being exposed for some time to the pestilential virus, got habituated to it, and in a great measure became insusceptible of its malignant influence.

There is reason to believe, that the lower animals were in some measure affected by the corrupt state of the air at this period. For it was observed in many places, that an unusual mortality occurred amongst black cattle, sheep, dogs, and other domestic animals. Thus in the Backergunge District, cattle had the disorder, and were cured by opium and the other remedies found most serviceable in the human species. Cows when seized, shed their young. So, in Tipperah, great numbers of horned cattle and sheep were seized with vomiting and convulsions, and suddenly expired. In 1815 again, half the cattle of the lower part of Tipperah were carried off by a disease similar to Cholera. In Delhi, dogs died rapidly; and more horses than usual were carried off by the dry gripes.* In the Rajpootana Force, and throughout the whole of the Jeypore and Nagpore territories, the season was remarkably fatal to camels; and in the Centre Division, domestic animals of all descriptions died in great numbers; but in the latter instance the mortality might be ascribed to want of proper care and food. At Sumbhulpore, an Elephant had every symptom of Cholera; and was cured by brandy and laudanum. But the affection of brutes was by no means general. Thus in Dacca, Mymensing, Rajshahy, Nuddeea, Bhaugulpore, Tirhoot, Sarun, &c. the lower orders of animals are expressly stated to have enjoyed their usual health: So that the circumstance of their sickness in other quarters, during the prevalence of the Epidemic, may have been perfectly fortuitous." 195.

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* "In this city, a curious thing was, that large swarms of flies, which had infested the place before the breaking out of the Epidemic, wholly disappeared during its prevalence; and returned as it withdrew. This might be owing to the cold, sharp, westerly wind then blowing."

The last section is on the treatment of cholera. With this we need not occupy our readers. The following short summary conveys the result of the practice of our brethren in Bengal.

"1. The disease sometimes attacked with such extreme violence, as from the commencement, apparently to place the sufferer beyond the reach of medical aid, and to render every curative means employed equally unavailing.

2. The difference in the degree of mortality amongst those, who did, and those who did not take medicine, was such, as to leave no doubt, that, when administered in time, and with discrimination, it frequently saved the patient from death.

3. The chances of a patient's receiving benefit from medicine, diminished in proportion with the increased duration of the attack.

4. In Europeans generally, and in robust Natives, bleeding could commonly be practised, where the patient was seen within one, two, or perhaps three hours, from the beginning of the attack; and in all cases, in which it was resorted to, under such favourable circumstances, it was more successful than any other remedy, in cutting short the disease: usually resolving spasm; allaying the irritability of the stomach and bowels; and removing the universal depression under which the system laboured.

5. Amongst the generality of Natives, the depressing influence of the disease was so powerful, and rapid in its operation, as almost immediately to produce complete collapse, and nearly destroy arterial action: and, therefore, to render venesection, for the most part, from the beginning, impracticable.

6. In such cases the cure was best attempted by diluents, powerful anodynes, and stimulants; combined with calomel; and followed up by mild laxatives, and tonics.

7. Although it cannot be affirmed, that calomel possessed any specific power in checking the disorder, it was undoubtedly frequently useful in soothing irritability; and was, perhaps, of more certain sedative operation than any other medicine." 247.

Here we conclude. We shall make few remarks. We have placed the substance of all the Indian Reports before our readers, and they may form, as we have formed, conclusions from them. The bulk of the profession being now put in possession of these data, may proceed to the investigation of the disease as it exists in our own country, or in others, less cramped by ignorance, less fettered by prejudice than they would have been without them. For our own parts, we declare that we had rather know nothing of the disease, as it first shewed itself in India, than know it through the medium of the imperfect, patched, and garbled statements, which have abused of late the public ear. We have dedicated some trouble, some time, and some space, to procuring and reviewing these documents, and we deem no apology necessary to our readers for their re-publication. On the contrary, we conceive that we have done a service to those who are anxious for sound information, correct facts, and narratives highly interesting to all, but particularly so to medical men.

VI.

A MANUAL OF MIDWIFERY, OR COMPENDIUM OF GYNÆCOLOGY AND PAIDONOSOLOGY, &c. By *Michael Ryan*, M. D., &c. Small Octavo, pp. 737. Third edition, with plates, 1831. Price 12s.

THE talented and industrious author of this manual has rendered it totally impossible for us to analyze the work. It is itself a condensed analysis of most other works on the subject. Let himself speak.

> "It has been long remarked that all our knowledge of any science might be easily compressed into a small compass, by confining it to a simple enunciation of fact and inference. It appeared to me that this principle might be applied with peculiar advantage to the Science and Practice of Obstetricy; and it was by a rigorous adherence to it, that I have accomplished this work. My object was to concentrate facts and opinions, to describe them in language as simple as possible, under such arrangement and classification as would afford the easiest reference to the immediate object of research." *Preface.*

Dr. R. alludes to the inconvenience which he experienced in the earlier years of his practice for want of such a compendium; and states that, from the flattering encouragement the two first editions have received in this country, on the Continent, and in America, he has been stimulated to spare no pains in preparing this impression with all the improvements of which it was susceptible. Every line of this third edition has been re-written, and carefully revised, referring, on all occasions, to the last editions of the standard works on midwifery.

> "In publishing this compendium, my object has been to present students and young practitioners with a concise, yet comprehensive, view of the exact state of Obstetric knowledge, by compressing into a small space all that is essential to be known upon the subject." ix.

Dr. Ryan has proposed a new nomenclature, which we hardly expect to see soon adopted, in consequence of the general disinclination to learn new names, of old things. We must give Dr. Ryan's nomenclature, however, the praise of being more classical and erudite than that which is in general use among obstetric writers. Whether it is entirely original, we have not time or inclination to inquire; but we take it for granted that it is, from Dr. Ryan's own assertion. Embryotomy, dystocia, and one or two other terms are, of course, adopted from preceding systems of terminology. Dr. R. claims the merit of being the first to change man-midwife into the more erudite name of obstetrician—and midwifery into obstetricy. Velpeau and others have adopted this improvement.

> "The work is divided into four Parts, and each is subdivided into Articles and Sections.

The *First Chapter* is entitled Gynæcotomy, and comprises the Anatomy of the Sexual Organs of Women.

The *Second Chapter* is headed Gynæcophysiology, and is divided into four Articles; 1. Nubility; 2. Utero-gestation, or Pregnancy; 3. Delivery; and 4. Lactation, or the Period of Suckling.

The *Third Chapter* is entitled Gynæcopathology, and is divided into four Articles; 1. Parthenosology, or diseases of nubility, or of women in the unimpregnated state; 2. Encyonosology, or diseases of utero-gestation or pregnancy; 3. Dystocia, difficult labour, or morbid parturition; 4. Lochionosology, or diseases of puerperal women.

The *Fourth Chapter* is designated Paidonosology, or diseases of infants and children." xiv.

As we have before observed, it is quite impossible to even attempt an analysis of such a work as this, displaying, as it does, the laborious research of years, and a solidity of condensation and concentration which we could not hope to equal, much less to surpass. All we can do is to strongly recommend a work which indeed has proved its own merits by arriving at a third edition, and to offer an ample specimen of the performance, taken at random, and by no means the most favourable sample which we could adduce.

"PUERPERAL FEVER—FATAL CHILD-BED FEVER.

It is become fashionable of late years to question the opinions of our predecessors, and in no instance more remarkably so than on the nature of the disease under consideration. There is no disease about which there is so much dissonance of sentiment as puerperal fever; many of the most eminent obstetricians in Europe and America entertain discordant opinions as to the pathology of the disease. Some contend that 'it is excessively absurd to speak of puerperal fever, except as a symptom of a local disease. (Conquest, Blundell, Duges,) while others, as Hamilton, Burns, Joseph and John Clarke, Roux, Velpeau, Mastoscheck, Raimann, Hartman, Boer, Schiffner, Festi, Belletzky, and Editors of the Edinburgh Medical and Surgical Journal, 1824, entertain a different opinion.

The first accurate account of puerperal fever appeared in the Mem. de l'Acad. Roy. de Soc. 1746, for a full detail of which I refer the reader to my Essay in the London Med. and Surg. Journ. 1829, vol. iii. p. 18.

Dr. Gooch has given an imperfect history of this disease, and absolutely contradicts himself. At one time he strenuously maintains that it is peritonitis, or as he unfortunately designated it, peritoneal fever; and in future pages he tells us, that depletion is not the remedy in some cases; so that he is and is not a monopathologist. Subsequent experience has proved, beyond all doubt, that the disease under notice is not peritonitis. This will appear by a reference to the essays of Dr. Conquest and M. Tonnellé, which I have inserted in full in the London Med. and Surg. Journ. 1830, vol. v. No. 25.

Dr. Conquest objects to the vague term puerperal fever, under which are confounded the most opposite diseases of the brain, chest, abdomen, and pelvis. He informs us, that in many cases the morbid appearances are not sufficient to account for death. He has only found a fallopian tube, or ovary inflamed. In other cases there are hysteritis, uterine phlebitis, gangrene of the uterus, and agglutination of all the pelvic viscera. The type of the inflammation will be so modified by circumstances as scarcely to be recognised as the same disease in different women, in different districts, and during peculiar constitutions of the atmosphere. He thinks the disease communicable by medical men and nurses, that gestation and parturition produce a change in the physical condition of the female, which so modifies disease as to give it a specific character. This is decidedly the general opinion of medical practitioners. He is certain that the disease may commence during gestation, from mental depression, impure air, bodily fatigue, low living, improper food, &c. It may commence as hysteritis, or peritonitis. The approach of the disease is often so obscure as to elude detection.

When the disease is inflammatory, copious depletion is the remedy: when epidemic, it defies all treatment. The greatest caution must be observed in using the lancet. Leeches and cupping are often valuable adjuvants; hot turpentine applied to the abdomen is of great use, it should be used with flannel every six hours for ten minutes at each time, until high erythematous efflorescence takes place. In my own practice I use it freely at once, until the erythema appears. Oil of turpentine alone, or combined with castor-oil and laudanum, is a valuable purgative in all cases, not admitting of much reduction of power. Opium and mercurials, in large doses, are invaluable after bleeding and purging. The reader will find further observations on the efficacy of these remedies on referring to the article Peritonitis in a former page. Camphor in scruple doses, combined with opium, is a valuable anodyne in cases of great restlessness. Digitalis, nitrate of potass, ipecacuanha, and antimony are valuable adjuvants, but must not be relied on exclusively. Such are the leading facts detailed by Dr. Conquest in his Observations on Puerperal Inflammation, commonly called Puerperal Fever, read before the Hunterian Society of London, February 1830. M. Tonnellé prefers the term puerperal fever to peritonitis or metro-peritonitis, because it is more comprehensive than the others; it expresses nothing by itself, and does not prejudice the nature of the disease. He informs us, that the disease raged at the Maternité during the year 1829, with more violence than at any period since the establishment of that hospital. He gives the following account of the Pathology. 'It is in the most violent cases that the integrity of the peritoneum is most constantly preserved; it is mostly inflamed in the hypogastric region. The internal surface of the uterus is almost always covered with a putrilaginous matter of a red brown colour, and of an insupportable fetidity. The proper tissue of the uterus is rarely changed, except by ramollissement or putrescence. Suppuration of the veins and lymphatics of the uterus, is seen in three out of five cases of puerperal fever, and is nearly as constant as peritonitis. It may extend to the ovarian, hypogastric, and abdominal veins. This phlebitis exists generally on the sides of the uterus. M. Dance held that it existed more frequently near the insertion of the placenta. The lymphatics may take up fetid fluids after delivery, and become inflamed. *The presence of pus in the vessels, and its necessary transmission through the circulation, causes rapidly a palpable infection of the blood, and a certain number of phenomena which impress on puerperal fever an especial character, a characteristic physiognomy.* In two hundred and twenty-two cases, the uterus was affected in one hundred and ninety-seven, and the peritoneum in one hundred and ninety-three; there was pus in the uterine veins, and lymphatics in one hundred and thirty-four cases. The terms peritonitis or metro-peritonitis cannot be applied to many of the alterations described, but the term puerperal fever may be applied to all—it prejudices none of them.' (Des Fièvres Puerperales observées à la Maternité de Paris, pendant l'Année 1829, &c. Par M. Tonnellé. Arch. Gen. de Med. Mars et Avril, 1830; Lond. Med. and Surg. Journ., July 1830.)

SYMPTOMS OF PUERPERAL FEVER.

The disease commences from one to eight days after delivery, the patient complains loudly of the severity of the after-pains, and refers all her suffering to the region of the pubis and uterus. The disease is ushered in with much shivering or rigors, the pulse varying from 120 to 160. There is great prostration of mind and body, and a sense of undescribable oppression about the præcordia, and often an utter carelessness about the infant. There is always intense pain in the head. Sometimes the skin is hot and dry, face flushed, and indicative of great distress of mind. Respiration anxious and profound, as if performed with a sigh. Pain in the uterine region aggravated by pressure (metro-peritonitis,) which is first confined, but soon extends to the whole abdomen. There is much restlessness and jactitation, the abdomen rapidly becomes distended as large as before delivery, the pain sometimes diminishes or ceases. Nausea, or vomiting, at first of bilious, and at length of a coffee-coloured matter occurs; sometimes there is diarrhœa or constipation, the face is peculiarly ghastly, and becomes pale, circle about the eyes livid, lips dry, headache, tinnitus aurium, tongue pallid or red, secretion of milk suppressed, lochia continued, but may be suppressed, according to Dr. John Clarke; urine sparing and high coloured, bowels confined. The eyes become dull, the pupils dilated; the nose sharpened, the cheeks hectic or pale, the lips purple, or the face livid, as in the last stage of typhus; the forehead and chest are covered with cold perspiration. The patient lies on her back, with the lower limbs drawn up, to relieve her respiration, which is much impeded by the tumefaction of the abdomen from gas or effusion; the tongue becomes black, mouth aphthous, teeth covered with sordes, the breath cadaverous, vomiting of a brown pitchy fetid matter, involuntary alvine evacuations of black colour, with fetid odour; the abdomen becomes less swelled, the countenance is inanimate, the alæ nasi are tremulous, the respiration becoming more and more panting. The patient speaks incoherently, mutters to herself, or is delirious and attempts to get out of bed. The pulse is so rapid as not to be reckoned, the perspiration is cold and clammy; there is subsultus tendinum, and death soon closes the scene. Dr. W. Hunter stated in his Lectures, 'treat the disease as you will, three out of four will die.'

The disease attacks every temperament and constitution, the strong and weak, the young and middle aged, the poor and rich; but is more common among the poor and middle classes, and from the age of puberty to thirty-five, than at any other period. It occurs most frequently within the first eight days after delivery. It is one of the most fatal diseases. Lowder considered the inflammation of the peritoneum was erysipelatous, and the fever typhoid. He said that all patients who were bled, died; and that two were cured by taking a gallon of decoction of bark daily. It is most rapid in its fatal career, often terminating in forty-eight or thirty-six hours—nearly as rapid as the plague. It attacks single women after delivery, as well as the married. Dr. John Clarke was of opinion, that a succession of warm damp seasons and mild winters would induce the disease. This is also the opinion in Dublin (Lawder de Febre Puerperal. Edin. 1821.); yet why does not the disease prevail in private life, which is not always the case, if the constitution of the season be the cause of it?

During the Autumn of 1819, fifty-six women died of puerperal fever at Vienna; the patients were mostly between twenty and thirty, were of a full habit of body, and three only were emaciated. Seven patients had the disease in the Hospice de Perfectionnement at Paris, during the Autumn of 1824, and all of them were under thirty years of age. (Rev. Med. Janvier, 1827.) Three of these patients recovered by the use of mercurial frictions, the rest died; and in all the uterus was inflamed, and gangrenous in some parts. Velpeau, Bourgon, and Roux, tried the mercury, as recommended by the surgeon at the Hospital at Antwerp. I shall detail their opinions in this most formidable disease, as soon as I shall have described the report of the Vienna Professors of 1819. These eminent men were appointed as commissioners by the government to inquire into the cause of the epidemic; and report that 'the fever was preceded by marked changes in the whole system, and particularly in the uterus, indicating clearly an inflammatory state. The lochia disappeared immediately, or in a few hours. The breasts were found empty of milk, loose and flabby. The mouth of the womb was found gangrenous, when the inflammation was most recent. In the last stage of the disease, symptoms of effusion into the chest and abdomen, extreme debility of the powers of life, and gradual dissolution, were apparent. Effusions of a brownish serum, mixed with coagulable lymph, were found in these cavities. The rapid putrefaction of the body in a few hours after death—the dissolved state of the blood, the strikingly soft state of the whole bowels, heart, lungs, liver, spleen, kidneys, and particularly of the womb, indicated a colliquative putrescent condition of the whole system induced by disease. The uterus was gangrenous in every instance, especially at its orifice, and it appeared to spread from this point as from a focus. This was seen in all the bodies, fifty-six in number, all the patients having died, from the 26th of July to the 31st of August. The *treatment* of the disease had from the first been antiphlogistic; blood-letting, leeches to the abdomen, with emollient cataplasms and clysters, blisters, calomel, and emetics were used. On the commencement of the debility, they had recourse to diffusible stimulants, but with the same unfortunate results. Most of the women experienced, previous to admission, a burning heat in the abdomen, near the pubes; slight shiverings and distressing pains in the shoulders; and the greater number had erythematic spots on one of the hands and feet, and chiefly on the joints. Forty of them had laboured under privations before delivery.' During the last puerperal epidemic fever of Edinburgh, 'the disease spared neither high nor low, rich nor poor, those delivered in the Hospitals, in the city, nor in the environs, neither the gay and dissipated, nor the most retired and domestic.' (Edin. Med. and Surg. Journ. July 1824)—'But,' continue the editors of the last work, 'shall not disease, which in every individual seized with it terminates in gangrene, and in the destruction of the whole organization, which appears as highly malignant, we may say, as pestilential fever, not also at least generate contagious matter, since it is universally allowed, that gangrenous and putrid fever very readily produce contagious matter? Has not the disease a striking analogy to hospital gangrene, typhus, and even the exotic pestilential diseases?' For a more detailed account of the subject, I must refer the reader to the Edinburgh Med. and Surg. Journ., and to the Med. Chirur. Review, 1825, vol. ii. The German Reporters advise a separation of the patient from the healthy, though no contagious property could be traced; a recommendation made by Clarke of Dublin, Clarke of London, Young, and Hamilton of Edinburgh, and Velpeau, Bourgon, and Roux, of Paris. The three last named practitioners, in their report above alluded to, had tried the various modes of treatment recommended by Denman, Leake, Gordon, Hey, Butter, Manning, Walshe, Hulme, Clarkes, Hull, Hamilton, Armstrong, Brenan, Sutton, and Broussais, and all without success.

From fifty to two hundred leeches were applied to the abdomen, as recommended by Broussais and Labatt, with all other means 'to boot,' in fifty cases; and without success. Even blood-letting from the arm had been freely tried at the same time. The reporters then had recourse to mercury, and ordered inunctions on the abdomen, two drachms of the ointment every two hours, which saved three patients out of seven; the disease being advanced and hopeless in the fatal cases. Two grains of calomel were given every two hours, at the same time. They think themselves warranted to draw the following conclusions from the facts they observed:—

1st. That puerperal peritonitis once completely established, and abandoned to itself, is almost invariably mortal.

2d. That it remains yet to be proved that sanguineous depletion *alone* is adequate to the cure of the disease.

3d. That the writings of Hamilton, Gordon and Vendenzande, incontestibly prove that, by means of calomel in large doses, many cases of puerperal peritonitis of the most severe kind have been saved.

4th. That mercurial frictions over the abdomen, made at short intervals, promise considerable success, and that this ought to draw the attention of the profession to the said point of practice.

5th. That, by means of mercurial frictions, patients have been rescued, as it were, from the brink of the grave; and consequently that this remedy should be tried, however late in the disease.

6th. That the friction should be continued without fear, until the mouth becomes affected—and in most cases, for some time after all the symptoms have subsided.

7th. That it would probably be advantageous to conjoin the internal administration of calomel, warm baths, and warm temperature.

8th. That the facts observed by the authors, without being sufficiently numerous or conclusive, are yet such as may encourage, authorise, nay, compel practitioners to prosecute the enquiry.

From much consideration on all the opinions on this subject, I think it is obvious that the disease under consideration is a peculiar one, and widely different from common inflammation of the peritoneum, that it commences in the uterus, and is best relieved, perhaps cured by the free use of mercury. Dr. Blundell recommends copious blood-letting as early as possible, and repeated two or three times: but this has failed with the majority of domestic and foreign practitioners. It is rather surprising, that local bleeding has not been more generally employed. Thus leeching and cupping might be applied to the groins, hypogastric region, and the former to the labia and vagina. Again, why not apply cold to these parts, and also to the vagina and uterus. Cold injection, or pounded ice might be introduced into the vagina, and applied to the orifice of the uterus; to that part which is first affected. The only objection to the use of cold would be the presence of the lochia; but this should not prevail, for the application of cold, both externally and internally to the uterine region, would lessen vascular action, increase uterine contraction, and so far from suppressing the lochial discharge, most probably increase it. General bleeding should precede the use of mercury, which will ensure its effects, as on all other occasions.

I conceive great improvement might be made in the application of the mercury. It ought to be given in large doses, as recommended by Boyle in syphilis; by Cartwright in the same disease, in fever, liver complaint, and acute and chronic dysentery (Medico Chir. Rev. 1826, p. 339;) and by Musgrave, in the fevers of the West-Indies. (Edin. Med. and Surg. Journal, 1827, v. 28.)—Musgrave's plan is most applicable to the rapidly fatal disease under consideration, which is the exhibition of calomel, every three or four hours in the following doses, until some effect is produced. He divides two scruples of calomel and one scruple of camphor into twelve papers, and he has exhibited from three to five hundred grains of the former, in fevers of the West-Indies, with success. He informs us, that the camphor promotes the mercurial action.

Again, the mercurial ointment should not only be applied to the abdomen, as recommended by the French, but also to the axillæ, a mode that will often suddenly produce its effects.

Before concluding this article, I should mention the use of the oil of turpentine, as recommended by Dr. Brenan of Dublin. That gentleman published an Essay on the use of this medicine in puerperal fever; and records six cases, four of which it completely cured, and relieved the others. The work, from which I quote, was published in 1814. The four successful cases occurred in the Dublin Lying-in Hospital, and were witnessed by the assistant-physician of that period. The cases occurred in 1812, when the disease destroyed a great number in the hospital. The patients on whom it was tried, were despaired of when the turpentine was exhibited. The quantity of the remedy did not exceed two ounces in any case, and was given in the proportion of half an ounce, or a table-spoonful. It was applied to the surface of the abdomen, and with the effect of relieving the tension of that part. The patients declared themselves suddenly relieved by the medicine. It was exhibited by Hamilton in a few cases, but without success. Blundell and Copland also tried it in this country, but without producing any marked benefit. They tried it, however, only in a few cases. The profession in Dublin also have ceased to employ it. If an ounce or two of oil of turpentine could cure the real puerperal fever, the discovery would justly entitle its author to the especial notice of the government, and to the thanks of posterity. The talented author has not explained the mode of operation of the remedy, nor has he given that minute history of the symptoms of the cases which he has related, that is necessary to establish them as real instances of the disease under consideration. It does not follow, that as puerperal fever ravaged the hospital at the period, every woman, 'who vomited green and yellow bile, and had pain and tension in the abdomen,' laboured under the disease; for it has happened in the same hospital, that a woman lying between the beds of two others, labouring under the disease, was not affected. This is asserted by Lawder and Raymond, in their inaugural dissertations on the disease published at Edinburgh, 1821. The remedy, however, has not been tried fairly by the profession, for I have been unable to find a single practitioner who has employed it in ten cases. All who used it assert it does no injury, and therefore it should be tried with the other remedies, as already described.

Blundell has known the disease to prove fatal in twenty-four hours; and Joseph Clarke was of opinion, it might set in before delivery; a fact that was proved in the German epidemic. Haighton described a case that occurred ten or twelve days after delivery, and proved fatal. It may commence insidiously, and has been mistaken for ephemera, milk fever, after-pains, colic, spasm of the stomach, bowels, and uterus; in fact, most of these diseases are styled puerperal fever, by the majority of practitioners.

In milk fever, the abdomen is soft, and not pained on pressure, the rigors are slight, and the pulse seldom exceeds ninety. The countenance is natural, the breasts are swelled, hot, and tender, and all these symptoms disappear in twenty-four or thirty-six hours.

It can be distinguished from after-pains, they being always periodical, and rather relieved by pressure, and generally removed in twenty hours, the countenance is natural, the pulse is only quick during the severity of the pains, and the lochial discharge is natural; but soon fetid in puerperal fever. Again, in colic, spasm of the stomach, duodenum, and uterus, the pains are periodical, and the pulse scarcely affected, except during the fit. Blundell asserts that the disease may be cured, if the patient be bled within six hours of the chill; and that she will usually die of the disease, if continued for twenty-four hours. The efficacy of bleeding is not confirmed by the reports of the French and German physicians, nor by the statements of many British practitioners. Blundell recommended blood-letting from twenty-five to thirty-five ounces, if the pulse range from one hundred and twenty to one hundred and sixty, and there be pain on pressing the abdomen; the operation to be repeated from four to eight hours if the symptoms be unchanged. If the pulse is lowered, and the pain less, then the operation should not be repeated. He is rather inclined to recommend the bleeding a third time in six hours after the second, if the pulse and tenderness are as urgent as before, 'though from the use of venesection, he fears much benefit is not to be expected. Beware of bleeding, if collapse has begun, or if the two first bleedings have exceeded fifty ounces or more.' An average quantity for a third bleeding is from ten to twelve ounces. The rapidity of the pulse alone, or the tenderness of the abdomen, will not justify the second or third bleeding. The bleeding should be performed in the first twenty-four hours after the chill, and not exceed fifty ounces. Opium, to the amount of ten grains, may be given after the bleedings, watching the effects.

Calomel was given to the amount of two scruples after the first bleeding, and the mouth was soon affected, but the patient died. Blisters are objectionable in the worst forms of the disease, as they render it impossible to decide whether the tenderness be relieved. Leeches in great numbers are objectionable after the second bleeding: the oil of turpentine, as recommended by Brenan, is an excellent rubefacient, and may be applied to the abdomen, until redness is produced. There is great danger from too much depletion, collapse may be hastened by it. Doulcet of Paris, in 1782, recommended ipecacuan emetics, which are now never tried. The pressure caused by the abdominal muscles during vomiting would aggravate the disease. For a full account of the pathology and treatment of this disease, from the earliest period to the present, I refer to my observations in the Lond. Med. and Surgical Journal.

Tonnellé places most reliance on mercurial frictions, which saved three patients. Dr. Isaac A. Johnson has published six cases, in each of which he exhibited half an ounce of turpentine and the same quantity of castor oil every hour, until the bowels were freely purged, and then continued the medicine at longer intervals, and all terminated successfully. (Philadelphia Med. Journ.)—Dr. Payne, of Nottingham, most strongly recommends the oil of turpentine, and has always found it successful. (Edinb. Med. and Surg. 1822, vol. xviii. p. 538.) He never used depletion of late years. In a subsequent essay he informs us that the disease was epidemic in the Winter of 1822. 'Not any of those who were ill of the disease, to whom I was called, were bled, either generally or locally, and every one of them recovered. Augmenting the intestinal secretion, appeared very speedily to put a stop to the complaint in every instance.' (Op. Cit. 1824, vol. xxii. p. 59.) Dr. Dewees, the eminent American obstetric writer, has lately recorded a case of real puerperal fever which was observed by two other practitioners. The antiphlogistic plan was strenuously pursued, but without success. The case was considered hopeless, when thirty minims of oil of turpentine were exhibited every hour, sinapisms applied to the legs, and an ounce of mercurial ointment rubbed on the abdomen every night, with an enema containing one drachm of laudanum. This practice was continued for three successive days—the patient recovered. (Amer. Journ. of Med. Sciences, Aug. 1828.") 650.

A very minute and extensive index is added to the work, and must greatly enhance its value as a manual of reference at the bed-side of the patient. The book may be carried in the pocket of the practitioner, and the varied sources of information which it points out, will render it very acceptable to the lecturer and writer on obstetric subjects.

VII.

ON THE EPIDEMIC CHOLERA OF NEWBURN. By *D. Craigie*, M.D. (Ed. Journ. April 1832.)

FROM the accounts which appeared in the Scotch newspapers, and the proceedings of the Board of Health in Modern Athens, we had begun to despair of any gleam of light or reason from the city on the hills. The medical faculty on the north side of the Tweed seemed to embrace, one and all, the darkest and most gloomy doctrines of contagion that were ever propagated, at the point of the bayonet, on the banks of the Wolga, or amid the steep defiles of the Carpathian Mountains! In despite of this, and of the universal cry of contagion in this country, from the Privy Council in Whitehall, to the rudest cholera hospital in Musselburgh, we maintained the doctrine with which we set out—that cholera is an epidemic disease, and its propagation by contagion is comparatively a rare contingency, and unessential to its progress in this or in any other country. We regretted to find that so able and influential a periodical as the Edinburgh Medical and Surgical Journal had, with its usual candour and impartiality—and after weighing well the evidence transmitted to us from the Continent, come to the conclusion that cholera was a contagious disease, which had travelled from the Ganges to the Wear by means of personal communication—then, indeed, we perceived that we stood nearly alone, and that it would be almost a miracle if the tide of professional and popular belief did not run uninterruptedly against us. In Edinburgh, too, where we expected the most rigid scrutiny into facts, and the most severe and pure deductions from those facts, we learnt, to our surprise, that Mussulmen did not place more implicit faith in the Khoran, than did the magnates of the intellectual city in contagion, and contagion only! But we were mistaken. Those men who thought least, were loudest in their adhesion to the doctrines of the London boards of health—while others, who were investigating facts, and deeply meditating on the subject of the epidemic disease, were preparing to come forth with arguments and histories, calculated to disturb a little the premature professions of faith promulgated by their less cautious brethren. The paper which lies before us will make a strong impression on the minds of medical men; not only on account of the talents of its author, but of the spirit of philosophy and candour which pervades every line of the document. No one will say that Dr. Craigie came to this practical inquiry with a mind biassed in favour of non-contagion. If there was any leaning, it was to the other side, grounded on the faith of what he had *read*. We shall soon see how far the evidence of his own senses corroborated the second-hand evidence derived from others.

In no part, perhaps, of the world has the epidemic, called cholera, shewed more destructive ravages than in the village of Newburn, situated on the north bank of the Tyne, five or six miles from Newcastle. Thither Dr. Craigie repaired to view the disease with his own eyes, and to draw deductions from the evidence of his own senses. It appears that the north bank of the Tyne, at the place above-mentioned, rises abruptly into hills of moderate elevation, on the slope of which, between the river and these eminences, stands the village of Newburn. The opposite or south side of the river is a flat alluvial soil. The following passage will convey some idea of the medical topography of the north bank of the Tyne, where are situated Scottswood, Limmington, and Newburn.

"Many, if not most of them (the houses) are built on a descending bank, in such a manner that, though the southern exposure of the house is above ground, from four to five feet at least, the northern or back exposure is below the surface of the earth. The doors of these houses, which are on their northern sides, are at the base of a flight of five or six steps, and the windows, which are not about three feet high, are completely on a level with the surface of the ground. A pathway about five feet broad runs along them; and on the north side of the path is a row of small hovels constructed of wood and clay or earth, and devoted chiefly to the breeding of pigs and some poultry. In this tract humidity abounds, and there is a good deal more filth than is compatible either with comfort or salubrity." 339.

Nevertheless the inhabitants of these villages appear to have enjoyed good health, the staple food being bacon, and bread baked with milk and butter. The village of Newburn contains 131 houses, 13 of which contained two families each. The number of inhabitants was estimated at 550. In the latter end of December, a young man was attacked with the epidemic, went through the diarrhœal and asphyxial stages without remedies, and died, on the 4th January of the present year, of the consecutive fever, apparently a cerebral inflammation. Popular rumour connected this case, as usual, with importation from Newcastle, in the person of a man named Wailes, who had gone to Newcastle and returned to *Limmington* some time about the death of his son in Newcastle. The widow of the son had also come to Limmington, where the father in-law, an intemperate glass-blower, exposed to great vicissitudes of climate, was attacked, and died on the 29th December, the very day when Robson was attacked at Newburn. It is needless to dwell on such ridiculous proofs of the introduction of the contagion as these. It is of far more importance to state, that "diarrhœa had been prevailing to a greater or less extent, among all the houses situated along the north bank of the Tyne, from the middle till the end of December, at a period when it was impossible to suppose that it was transferred from the person of Wailes, and when it was known that several of the associates of Robson were labouring under choleric or common diarrhœa." The following passage offers a remarkable corroboration of the statement which we published in our Journal for January, page 304.

"I then learnt, in a very partial and imperfect manner, a fact of which I have since had at Musselburgh tolerably satisfactory proof, that in many persons slight looseness comes on, and after lasting for a day or two subsides spontaneously, or after very ordinary domestic remedies, and, if not re-excited by some error in diet or exposure to cold or moisture, permanently. But after any irregularity, however slight, this looseness is liable to recur, and again subside, or under certain favourable circumstances to be converted into cholera, mild or virulent. *I must also say in reference to this subject, that, however proper, symptomatically and therapeutically, the distinction of cases into* diarrhœa, common cholera, *and* malignant cholera *may appear, it is, when applied to the epidemic, altogether inadmissible. I am satisfied, from the progress of this epidemic both on the Continent, and in England and Scotland, and from the facts which I have been able to collect either personally or from others, that these diseases differ in degree only, that all of them depend on common causes operating in different degrees, in different localities, and on different individuals.*" 343.

Dr. Craigie afterwards adds :—" We must, therefore, I conceive, admit a tendency to gastro-enteric disorder, which assumes, in certain classes of persons, different forms, *until it attains the specific degree of virulence* constituting genuine cholera." We request our readers to turn to the page above indicated, and see the remarkable coincidence of opinion between Dr. Craigie and ourselves.

We do not deem it necessary to follow our highly gifted author through the minute history of the epidemic as it spread over, or rather prevailed in, the devoted village of Newburn. We shall, however, introduce the celebrated proof of contagion afforded by the death of the Rev. Mr. Edmonston, Vicar of Newburn.

"This day was, however, remarkable for the 15th case, and the 5th death, which deserves particular note, being that of the vicar of the parish, the Rev. Mr. Edmonston, which has been adduced by several persons as an instance of the influence of contagion. This idea I think it quite impossible to adopt, if we consider the circumstances of the case with any attention; but to obviate any thing like bias, I shall state the simple facts, as I know well they took place.

The Reverend Mr. John Edmonston was a man somewhere between 76 and 80, of a full habit, and rather inclined to corpulence. He had, indeed, been somewhat among the sick; but this must have been of short duration, and was only during the last two or three days, that is, not sooner than Thursday the 12th of the month; and as he was extremely afraid of the disease, there was little reason to believe that he would expose himself unnecessarily. If I am not misinformed, indeed, he took every precaution in approaching the sick which a person impressed with the firm belief of the contagious nature of the disease could employ. His house, I must further remark, is situated at the west extremity of the Tyne side of the village, much nearer the river than any of the others, and stands, indeed, on a declining bank, with nothing but the terrace of the railway interposed between it and the water. Though extremely clean inside, snug and comfortable, I must say the situation is such as to obstruct in a remarkable degree the process of free perflation and ventilation. With the artificial terrace of the railway on the south, and the rising bank of the village and churchyard on the north, the situation of the vicarage of Newburn is such as to favour in a remarkable manner the sojourn of any damp vapours which might pass from the river or its banks to the adjoining surface. To this may be added, the circumstance, that the whole is surrounded by a high wall, which, on the one hand, ought to have excluded contagious principles or their conductors, while, on the other, it prevented the free circulation of atmospherical currents.

Mr. Edmonston was a scientific and amateur horticulturist, and was particularly successful in rearing some of the more rare and delicate varieties of tree and wall fruit; part of which he was in the habit of presenting to friends, part of using at his own table. For three weeks previous he had abstained from the latter indulgence with the rigour of an ascetic, and the self-denial of a philosopher. On Saturday the 14th of January, however, his circumspection appears to have been thrown off its guard; for on that day he had dined on an inauspicious dish of pickled salmon,—an article which is sufficient of itself in some constitutions to induce an attack of cholera, and which, in the present case, aided by the epidemic constitution, was too successful in giving rise to a rapid and violent attack of the epidemic disease. Mr. Edmonston appears to have felt no uneasiness for some hours after dinner. But he retired to his chamber at the usual time; and his domestics, who heard nothing of him till morning, found him then in a state of great debility and helplessness. He had been attacked with sickness soon after going to bed, and the whole night he had been purged repeatedly and violently. The reverend gentleman had some knowledge of medicine himself; and whether it was from distrust of its powers, or from a desperate idea of his own case, or from approaching insensibility, for he was of what is denominated an apoplectic habit, he neither asked for assistance, nor, when his servant proposed it, would he hear of it. He had also, it must be acknowledged, some unreasonable prejudice against our excellent friend Mr. Fyfe, whose delicacy would not allow him to wound the old gentleman's feelings by his presence. After some deliberation, however, it was determined that some attempt should be made to arrest the progress of his disorder; and accordingly he was visited first by Dr. Cobb, who prescribed the usual remedies, and then by Mr. Fyfe and Dr. Cobb together. At the first visit, about half-past two, his face was flushed, his sensibility impaired, and his pulse slow and labouring, and he seemed to be suffering under symptoms of cholera complicated with those of oppressed brain. He had occasional retching, and frequent rice-water dejections. An hour after, the symptoms of vascular excitement began to give way to those of colliquation. The face was bluish and leaden coloured; cold clammy perspiration poured from every part of the surface; he had frequent hiccup; the sero-albuminous dejections continued to run from him; and the spasms of the legs were repeated and violent. Mr. Fyfe and Dr. Cobb remained with him to the last, using every possible means to avert the fatal termination; but the old man breathed his last a little before five o'clock, not more than twenty hours from the first symptoms of uneasiness, and about twenty-five or twenty-six hours after the repast which had manifestly operated as the exciting cause.

I have been thus particular in giving the details of this case, because it has been more than once appealed to as an example of communication of the disease from the sick to the sound. I feel no difficulty in stating my opinion, founded on the reasons already assigned, that it is sufficient to look to the plethoric habits of the individual, the imprudent error of diet, and the epidemic constitution hanging over the village, and from which it was impossible that the parsonage could be exempt, in order to account for the attack and its unhappy termination. Where the attack can be explained on manifest principles, it is entirely gratuitous to have recourse to such an occult cause as contagion. *I venture to assert, without possibility of refutation, that the intercourse with the sick went in this case for nothing; and, had Mr. Edmonston secluded himself within his garden wall, the pickled salmon would have produced precisely the same effect.*" 349.

On the 16th of January, there were at least *fifty* new cases, in a population of 550! This is indeed a remarkable instance of a disease communicated from person to person! The following passage deserves to be recorded in brass or marble—but perhaps it will be more durable in ink.

"I went to Newcastle, however, with the determination to throw aside every thing I had learnt from the writings of others; to divest my mind of every preconceived notion; to doubt every thing regarding it; and to observe the disease personally with the impression that every fact required to be ascertained. I am quite aware that by this avowal I expose myself to the imputation of some degree of arrogance in supposing that all previous observers had been deficient in accuracy or assiduity, or had somehow failed to communicate a correct delineation of the malady. I have only to reply, that I went to study the disease personally; and as I confess my mind was a good deal confused by the discordant accounts of the success of very opposite modes of treatment, I was desirous to endeavour, on my own account, to disentangle some of the perplexity, and to form something like a distinct idea of the best and most efficient mode of treatment, in the event of the disease arriving, as it has since done, in our neighbourhood. Even on the great question, of the mode in which the disease originates and is propagated, I studied to go like one unbiassed either to the one side or the other, and resolved to admit no inference, unless supported by unambiguous facts." 356.

In the first place Dr. Craigie doubts the general opinion that the disease attacks *only* "the feeble, the broken down, and the dissipated, or even those in indigent circumstances." We agree entirely with Dr. C. on this point; but we maintain that, generally speaking, it is in the above classes, we have the exquisite and fatal forms of the malady. Among the affluent, as we stated in our last number, the peer may occasionally place himself on a level with the peasant, by predisposition, or by locality. This does not affect the general question as to predisposition. Dr. Craigie attaches great importance to errors of diet, during the prevalence of an epidemic affecting the digestive organs; and justly so. In the great majority of instances which we have investigated in this metropolis, we have traced the *exciting* cause to this source, both in the poor and the rich. He who is blind to this exciting cause is not an accurate observer.

> "In a very large proportion of cases the disease began with a sense of weight and fulness in the epigastric region, suddenly followed by profuse diarrhœa. The rapidity with which this symptom proceeded to the true choleric discharges varied in different cases, and appeared to depend on the constitutional powers of the individual, on the situation in which he was living, and on the promptitude with which the diarrhœa was mitigated and controlled by appropriate remedies. Thus in the case of the Reverend Mr. Edmonston, in whom the diarrhœal stage was extremely short, the individual was aged, plethoric, and neglected all remedies of every kind, so that till 2 o'clock, p. m. on the 15th, it may be regarded as an example of the uncontrolled and unmodified progress of the disease. In the case of Mary Newton, on the contrary, who was young, vigorous, and of unbroken constitution, but labouring under deep and overpowering mental distress, on account of the hopeless state of her sister, and the numerous instances of mortal sickness around her, the diarrhœal stage lasted from Sunday afternoon about 3, till the following day about 2, very nearly 24 hours. In the case of Mary Gibson, again, in whom the disease never assumed the genuine choleric symptoms, after anomalous illness of a week's duration, purging took place on Wednesday 11th, the second day of the epidemic, then some vomiting, after which she recovered under the use of some medicine; then on Saturday the 14th, she had discharges of watery fluid from the bowels; and on Monday, when we saw her, she complained chiefly of weakness and faintness, but was then convalescent.
>
> In other cases, however, the symptoms observed a different course, and after preserving the diarrhœal form for several days, subsided so much as to lead to the belief that the patient was convalescent, suddenly assumed the choleric character, with profuse and repeated rice-water discharges, sinking of the pulse, and coldness of the surface, and terminated fatally in the course of 20 or 24 hours." 359.

Dr. C. observes that the transition from the diarrhœal stage to that of collapse, was never, as it were *per saltum;* though sometimes rapid. In all cases, there were observed "gradual and successive changes."

> "In most of the cases in which I had an opportunity of remarking this transition, the countenance became first slightly blanched, and the skin began to assume a colliquative humidity. When the pulse was felt at this period, it was not gone, but greatly weakened in force and small in its size. The patient at the same time complained of a sense of sinking at the heart, with an uncomfortable sense of thrilling heat and unsteadiness, as if unable to support himself; and though there were instances in which the patient fell down at this period from weakness, yet afterwards, when the stage of collapse was thoroughly established, this extreme enfeeblement of the voluntary muscles was not recognized.
>
> When the stage of collapse is fully established, the countenance is not so much of a blue colour as of a dirty, or dingy leaden tint. The only part which makes any approach to blueness is the *prolabia,* or red skin of the lips, which in several cases I certainly allow did assume the tint of the bilberry,—and the nails, which are livid, or of a purple blue. At the same time, the skin of the arms and hands, and legs and feet became corrugated, or puckered into wrinkles; and the hands and fingers became rigidly and immoveably incurvated, as if the flexor muscles were affected by tetanic spasms. This symptom I regard as by far the most characteristic of the stage of collapse; for I remember none

in which it was wanting; and I saw several in which the others were not marked till immediately before death." 361.

Vomiting generally ceases when the stage of collapse is fully formed; but the discharges from the bowels usually continue to run off till the last. Dr. C. tested this fluid in many cases, but in one only did it produce any change, turning turmeric paper brown, and thereby indicating alkalescent qualities. Professor Turner found it to contain much albumen, and the salts of the serum.

The most prominent phenomenon in this disease, says Dr. C. is the failure of the circulation. Yet Dr. C. found the action of the heart to be always violent, jarring, and tumultuous, even when there was no pulse at the wrist. This we have frequently observed, by means of the stethoscope, after it had been "put down" in notes, at the bed-side, that the heart's action had ceased! It is not a little strange, that even the Central Board of Health has fallen into this error, and talk of the cessation of the heart's action long before death.

"Suppression of the urinary secretion, though frequent, is not an invariable symptom. There is no doubt that it is extremely scanty, and perhaps before death it may be altogether suppressed. But both at Newburn and Newcastle we met with instances in which the urine continued to be secreted during part at least of the stage of collapse. In the case of Margaret Jameson, a woman of 44, which was particularly well-marked, and terminated fatally, both the patient and her sister asserted, that she continued to void urine 12 hours at least after the commencement of the state of collapse, 2 days before death, while the surface was leaden-coloured, sodden, and cold, cramps were violent, and retching and purging were frequent and profuse." 363.

We do not know that a circumstance which we have more than once observed, namely, a discharge from the bowels of a fluid exactly resembling urine, both in colour and smell, has been noticed by any writers.

The majority of the cases were cut off in the stage of collapse—several in the consecutive fever. Dr. Craigie considers this fever as very different from typhus. In the anastasis, or consecutive fever of cholera, the heat is rarely above par; and though the action of the heart is strong, that of the arteries is feeble. The vessels of the head are invariably congested—and, in this respect, the term *typhoid* may be fairly applied, for who sees typhus without similar affection? The consecutive fever was always in proportion to the length and violence of the preceding collapse or cold stage, just as we see in intermittents of bad kind.

Out of 550 inhabitants, 320 had suffered from the epidemic; and of these 55 died, or one-tenth of the whole population!

On the pathology of this mysterious disease, Dr. Craigie has hazarded some ingenious speculations. We shall allow him to speak for himself.

"On the obscure and perplexing subject of the pathology of cholera I have little to say. The lesion of the nervous system, which has been so generally assumed, I confess, appeared to me nowhere to exist. It was clear that neither the brain, nor the spinal chord, or their nerves were *peculiarly* affected; and I could see as little proof that the gangliar system or the solar plexus was pre-eminently disordered. These organs, indeed, partake of the general lesion of the blood-vessels, in common with all others to which blood-vessels are distributed; but that they are specifically affected is, I conceive, a hypothetical assumption entirely.

All the phenomena of cholera, on the contrary, indicate in my opinion an affection of the vascular system and its contents; and in the exquisite form of the disease it bears a close resemblance to inanition of these vessels, *anaemia* suddenly induced, or the effects of profuse hemorrhagy. I do not mean to enter into any discussion of the question, whether the sero-albuminous discharge is a secretion, or by what mechanism it is effused. It cannot be doubted that it is poured forth from the blood-vessels of the intestinal tube, or the branches of the cœliac and mesenteric arteries at the expense of the serum, and much of the albumen of the blood. The effects of this are at least twofold. In the *first* place, the quantity of the circulating fluid is absolutely and most suddenly diminished; and *secondly*, by deprivation of its sero-albuminous portion, its fluidity is remarkably impaired, and it is thereby rendered less capable of moving, especially in the vessels of the third and fourth classes. These two circumstances combined give cholera a character consisting partly of hemorrhage or *syncope*, and partly *asphyxia;* and on this singular combination seems to depend the phenomenon of the cramps of the extremities, and the tonic incurvation of the hands, and fingers, and toes. Any one who has witnessed death by sudden hemorrhage, or has seen an animal bled to death, knows that spasmodic affections of the voluntary muscles accompany the last agonies of life. Those of genuine and exquisite cholera, I conceive, are of the same nature, and depend on a similar cause. As the blood is withdrawn from the muscles of the extremities to supply the defect in the large vessels communicating with the cœliac and mesenteric arteries, and as it ceases to move through them, these muscles are affected by irregular and involuntary contractions. On this subject, however, I cannot at present dwell longer." 372.

PROPAGATION OF CHOLERA.

The foregoing quotations and abbreviations must shew our readers that Dr. Craigie *observed* for himself and observed very accurately too. His observations on the mode in which the disease is evolved, must convince them that he *thought* for himself also—and that in a very original and independent manner.

"The question of the mode in which cholera arises and is propagated is perhaps not less difficult and perplexing. *The summary method of resolving the whole into importation and contagion has been very generally adopted; and the successive progress of the disease from the Gangetic Delta to the British shores, in the course of* 14 *years, has been confidently adduced as the strongest proof of the soundness of this view.* Many rather hard names have been applied to those who have avowed their inability to admit the conclusiveness of this doctrine; and some even have expressed their astonishment at the construction of the minds of those who have ventured to doubt the justice of the hypothesis of importation and contagion. *I am not ashamed to say, that to this school I do not belong, and that to this logic I shall not have recourse.* Every question regarding the mode in which a disease originates, and is propagated among a community of human beings, *must* be matter of opinion and hypothesis, and cannot be decided either by the numbers or the weight of the names by which it is supported. It is only by a cautious comparison of well-authenticated facts, so unequivocal and unambiguous as to admit of one explanation only, that this point can be determined. I shall in the following observations state the facts with which my visit to Newcastle made me acquainted, and compare them shortly with those observed by others." 372.

We need not follow Dr. Craigie through the historical details, and the specific proofs, of non-importation into Newburn—the wide circulation of the Journal which he so ably conducts, will ensure his observations an ample range of readers.

The following passage will speak volumes.

"The disease appears in several persons insulated and unconnected with each other, either all at once in the same night, or within an incredibly short space of time, so that the idea of what I denominate efficient propagation is entirely out of the question. I presume that the 55 attacks in Gateshead, mostly in one street, and one side of it, on the night of the 25th and morning of the 26th, must be given up at once as utterly inexplicable on the principle of contagion; for I remember no instance in the whole course of the annals of disease, in which such a number of attacks is simultaneously produced by such an agent. I am, on the contrary, acquainted with many examples of numerous simultaneous attacks of disease depending on miasmatic or atmospherical causes, and presenting in this respect a close analogy to that of the invasion of the Gateshead epidemic. I shall simply advert to the remarkable one recorded by Lancisi, of 30 ladies and gentlemen of the first rank in Rome, who, on an excursion of pleasure to the mouth of the Tiber, were exposed to a sudden change of wind blowing from the south over the marshes, and 29 of them were immediately seized with tertian fever. Instances of this kind, however, which could be multiplied with great facility, have not for a long time, and are not now considered as proofs of contagion; and, indeed, it is given by Lancisi as an example of a morbific cause of a different kind entirely, that of *miasma*, or what has recently been termed *malaria;* and I presume that the Gateshead cause must either be at once relinquished, or ascribed to some similar agent.

The example of Newburn is equally strong, so far as a small place and a limited population can be compared with a large and populous one. Between the night of the 10th and morning of the 11th, 16 persons were attacked with diarrhœa or choleric symptoms, 13 of whom had pure cholera, and of these 12 died in the course of 30 hours. Nine of the pure choleric cases, it must also be remarked, were on the Tyne side of the village. The attacks went on at the rate of from 10 to 12 every night, with various degrees of severity: and before a revolution of seven days was completed, 36 persons had been cut off by the disease, or at the average rate of six daily. I must confess my ignorance of any contagious disease that appeared in this sudden manner, and made such rapid havoc among a community so limited; and I think no resource is left but to admit the spontaneous, the material, or the atmospherical origin of the malady.

With these facts, let us compare those attending the appearance of the disease in Astrachan, Moscow, and St. Petersburgh. Had cholera been capable of introduction, it is reasonable to think that it might be excluded by the rules of the seclusive and non-intercourse system. Each of these cities, accordingly, was placed under a rigid system of seclusion and separation from infected places, by means of strong lines of military posts and barriers, which in the case of Moscow were twofold. Notwithstanding these precautions, however, the disease appeared in every one of these cities, and without the possibility of tracing it in any instance to unequivocal importation.

The example of the kingdom of Hungary is perhaps still more forcible. Nor, perhaps, was such a rigid and perfect system of non-intercourse enforced as that which was instituted on the southern, northern, and eastern boundaries of Hungary, when the disease appeared in Poland. Every defile of the Carpathian mountains was guarded with strong military posts, and watched with the utmost vigilance. Neither human beings, goods, nor brute-beasts, except, perhaps, an occasional wolf or bear, could penetrate into the Hungarian territories, unless at the muzzle of the firelock or the point of the lance. Yet how vain these precautions proved, was evinced in the course of a few weeks. For the disease appeared on the Hungarian side of the Carpathian chain in the month of June, and spread most rapidly through the town situate on the banks of the rivers of that well-watered country. It will not do in this case to say that the sanitary lines were broken in the ordinary sense. Broken they no doubt were; but by no human power." 376.

Let the advocates of "travelling cholera"—of the disease being communicated from one individual to another, from the Ganges to the Wolga, from the Vistula to the Wear, read the above sentiments of Dr. Craigie.

Our able author examined, with a critical eye, the medical topography of Gateshead, Newburn, &c.; and offers many conclusive arguments, "that certain atmospheric conditions, operating on *peculiar localities*, are most likely connected with the origin of malignant cholera." How exactly these ideas coincide with our own, as stated in our last number, p. 675, the reader will easily judge.*

Dr. C. conceives that "no satisfactory proof has yet been adduced to show that the disease was imported from places where it was previously prevailing," and hence he regards it as unphilosophical "to assume a principle without sufficient evidence." The able author then goes on to investigate certain local peculiarities of situation where the disease has been most prevalent, in order that others may compare his observations with their own. For these we must refer to the original paper.

Reverting to the important subject of the propagation of cholera, Dr. C. remarks:—

> "Though during the whole time of the epidemic, the intercourse between Newcastle and the neighbouring towns was extremely frequent and uninterrupted, no case of cholera had appeared. One example or two must suffice. There are few towns, perhaps, with which Newcastle has more intercourse than with Morpeth, an intercourse, I may add, conducted by persons who might act the part of very good and perfect conductors of any contagious disease. Regularly as the Wednesday returns, crowds of butchers and persons connected with the sheep and cattle trade flock from Newcastle to Morpeth. What circumstances could be more favourable, I ask, for the propagation of a contagious distemper? Yet, after most particular inquiry, I could not learn that the disease had appeared in the latter town. One gentleman, it is said, was attacked suddenly in his gig with symptoms said to indicate cholera, and died in a few hours; but this, if actually true, would be rather against the idea of contagion, since it appeared to be spontaneous in origin, and certainly was not followed by other cases.
>
> It has been generally presumed, that cholera was conveyed from Newcastle to Haddington. But why it should have stopped exactly at this point, two stages from Edinburgh, why it did not halt at Morpeth, at Alnwick, at Belford, at Berwick-on-Tweed, &c. &c. why it did not at once proceed to Edinburgh, are points with the explanation of which we have not yet been favoured. Both in Haddington, and afterwards in Musselburgh, so far as I could learn after most diligent inquiry, the disease sprung up spontaneously, whatever be the mode in which it was afterwards propagated." 379.

Dr. Craigie adduces numerous other circumstances tending to shew that cholera is epidemic and endemic, not contagious. Its sudden invasion, and equally sudden cessation, in the places visited, are quite incompatible with the doctrine of contagion. Thus, on Wednesday the 18th of January, there was not a case of cholera in Newburn:—"on Thursday *morning* it appeared in various parts of the town and vicinity." Is this like contagion spreading from individual to individual? But why need we multiply arguments on a question which now seems to be on the point of adjudication by the general sense of mankind? With one more extract we shall close our notice of this highly interesting paper.

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* "But while we acknowledge the operation of some general epidemic cause, we cannot but observe the facility with which the disease springs up in *certain malsain localities*, and the tenacity with which it clings to *them* afterwards—thus presenting far more of the endemic than of the epidemic character."—*Med.-Chir. Rev. April* 1, 1832.

> "As to the mode in which the disease, when once introduced, by whatever means, is diffused through a community, a few words will suffice. It must be admitted that it did run in families, two, three, or four of which were usually attacked; and this perhaps might be regarded as the strongest possible proof of contagion. This circumstance, however, must be accompanied with the qualification, that two or even three of a family were often attacked at once, or within so short a time of each other, that it is difficult to see how the disorder could have been communicated from the one to the other. I grant, that, on the period of intercourse necessary to communicate the disease, we have no exact information; and that we neither know whether one hour or one day is requisite; but we witnessed numberless instances in which the closest contact and the freest intercourse for some time was not followed by any attack. It must also be kept in view, with regard to the fact of families being attacked in Newburn, that this indicates equally the influence of the same local causes, since all were living in the same house, breathing the same air, using the same food, and exposed to the same local emanations. In one sense, indeed, the fact speaks more strongly against than in favour of contagion, since even in plague sometimes not more than one person in each family shows the marks of the pestilential poison." 379.

In conclusion, we may remark that this document from the talented Editor of the Edinburgh Medical and Surgical Journal, will do some service to the state—though it is somewhat late in its appearance. Fortunately for England, the fatal, heartless, and erroneous doctrine of contagion and importation, has done less harm, as far as human life is concerned, than in some other countries—because that horrible faith has been unable to reverse the laws of Nature, and the circumstances of society. It has done, however, incalculable mischief to commerce and domestic comfort. We will not be so uncharitable as the contagionists have been, who threatened "fire and ashes" on the heads of their opponents! No. We believe them to have been only deceived, and not designing deceivers. The very circumstance of their being so intolerant and bigotted, shews that they were *conscientious*. Do they allow so much for those who have opposed them? Alas no! From the first records of society, it has been found that, whenever the bigot took up an ERRONEOUS creed, fires, faggots, and daggers were poured on the advocates of TRUTH, with unrelenting virulence!

VIII.

LA DOCTRINE HOMOIOPATHIQUE. Par *Hahnemann*.

READERS, are you in search of truth? for if ye are, incline your ears to the oracles of wisdom in this wonderful book. Truth, M. Hahnemann assures us, is eternal as the Divinity: men may neglect it for a season, but the time inevitably arrives that it will pierce through the clouds of prejudice, and diffuse over mankind a beneficent light, which cannot be obscured. Such is the appropriate exordium to the revelation of his most magnificent discovery of homoiopathia, or the mode of curing one disease by giving another which is like to it, and which, being more powerful, is to overwhelm and extinguish the former. Strange that men, since the days of Adam, have been so hard of perception and of understanding, as not to have found out this most simple and sublime axiom of science, that the only method of annihilating any sensation, either of joy or of pain, is to drown it in one that is more intense! How is it, exclaims M. Hahnemann, that we cannot see Jupiter in the morning sky? Simply because it is hid by the superior splendour of the sun. How do we try to stifle any offensive odour? By snuffing tobacco, which has a stronger one. How shall we drown the lamentations of the miserable? but by the noise of fifes and drums. Is not the kettle-drum intended to deafen the roar of the distant cannon to the ear of the soldier? and is it not the best way of preventing the bad effects of excessive joy, to drink a dish of coffee, which, M. H. informs us, disposes the soul to most agreeable and happy impressions? But, in order to place this most important truth still more prominent, as far as regards medicine, we shall avail ourselves of a few, out of the many professional proofs adduced by our author, in confirmation of his doctrines:—Cholera morbus may be cured by giving drastic purges, as the white hellebore!—Profuse sweating is best counteracted by sudorifics!—Vertigo and nausea by narcotics such as tobacco!—Ophthalmia may be cured by acrid applications.—Dropsy by means which, according to the German physicians, will cause it in a healthy person.—Bronchitis by stimulating expectorants. —Dyspepsia, by such herbs as cause an extreme exhaustion of the vital energies, render the digestion painful, and destroy the appetite.—Inflammatory fevers by generous wines.—Drowsiness by the exhibition of opium.—Menorrhagia by the savin powder.—Strangury by cantharides.—Asphyxia by inhaling the fumes of sulphur.—Cancer by arsenic, which, M. Hahnemann assures us, often gives rise to cancer.—Inflammation of the tongue and fauces by mercury. Do we wish to cool a patient? immerse him in a warm bath. Does he labour under the effects of a coup de soleil? foment his head with hot decoctions. Has he diabetes? give him diuretics—or are his stomach and bowels inflamed? assuredly nothing is so serviceable as small doses of corrosive sublimate. We might easily enlarge our illustration; but the truth must now, we hope, be so very obvious and convincing to our readers, as to preclude the necessity.

Let us only keep in mind, therefore, that the groundwork of the theory is, that the deranged state of the organization, or of the function of a part, which is called disease, cannot be brought to a state of health, except by exciting another and a similar disease by the aid of medicines. Such is Hahnemann's homoiopathia, the only method which leads us, in a straight line, to an agreeable, certain, and lasting cure without causing any injury, or at all weakening the patient. The other two methods of treating diseases, and those which have been pursued by all, before this great German luminary appeared in the medical horizon, are designated by our author "allopathia," or "heteropathia," and "antipathia," or "enantiopathia;" under the former is classed the employment of bleeding and of blisters in inflammations; the use of purgatives and diaphoretics in fever; of diuretics in dropsy, and so forth; and, in short, any endeavour to check, control, or modify any morbid action of the sanguiferous, absorbent, and nervous systems, by exciting an action at variance with the existing malady, or by assisting Nature in any effort which she makes to relieve herself of it; whereas the latter denotes the practice of prescribing for insulated symptoms—as of ordering opium against watchfulness, laxatives against constipation, cold applications against burns, warm drinks against shivering, generous food and drink against weakness; a practice, according to the doctrines of the homoiopathic school, at once deceitful in its apparent effects and dangerous in its consequences. After these few words of prefatory explanation, we proceed rapidly to review the different sections of the work before us; to criticise it must be quite unnecessary, as there cannot be much difference of opinion on the score of its merits.

We much regret that the Doctor has not treated his readers, as he does his patients, by homoiopathic doses as minute and concentrated as possible; had he but docked one cipher from the 500 pages of this great work, his mode of treatment would have been as successful, and assuredly much more pleasant. We often have thought, while perusing the volume, of that sarcasm of D'Alembert —" an author bothers himself to amplify, what his reader equally bothers himself to abridge."

The first fifty pages are occupied with an assault and battery of all the ordinary common-sense doctrines of disease, which have prevailed in the world till Hahnemann propounded his views—views, says he, which are far elevated above that mechanical routine, of endeavouring to trace the causes and essential characters of maladies with a view to their cure. Hitherto it has been rather a boast of the enlightened members of our profession, to examine and watch carefully the operations of Nature; what means she employs, and what course she follows, in attempting to relieve herself of, or to repair, any injury done to the body; and we have been so blindly rash as to attribute much of our supposed superiority to the simpler and more rational views thence deduced. But it now appears that we have been led by an ignorant and foolish guide. Listen to the opinion of Dr. H.:—" Nature is brutish, and fails in almost all the efforts she makes: she cannot reason—she is incapable of reflection—she cannot, like a skilful surgeon, close the lips of a wound, and heal them by the first intention; she cannot cure an oblique fracture, however much callus she throws out round the broken ends of the bone; she cannot tie a bleeding artery; she cannot reduce a dislocation; and if permitted to have her own way, will even be so perverse as to make it irreducible;—so stupid is she, that in order to relieve herself from a foreign body impacted in the cornea, she will destroy the eye by suppuration; and in a strangulated hernia, she knows no other mode of overcoming the imprisonment, but by gangrene and death. In opposing any acute malady, her operations are directed by the laws of mere corporeal organization, and not by the inspirations of thought and reflection; in short, says the Doctor, they are, in such cases, a good sample of allopathia!! In a word, every thing which she does to cure the diseases of the body, must satisfy the mind of the philosopher that her methodus medendi is a tissue of suffering and pain, and that, therefore, if he wishes to practise medicine with credit and honor, he must cast away the guidance of such an ignorant and obstinate conductress; he must abandon the practice of counteracting disease, by manfully opposing its cause or symptoms, for the oracle of Germany assures him that, even though he cures it apparently, the primary affection remains untouched and unreached, and that the fire is only smothered, to break out with redoubled fury. Let us take the case of a full, plethoric, and luxuriously-living man being attacked with gout, and consider what Nature suggests, and what physicians, hitherto trusting to these suggestions, recommend. Do we not find that the patient is feverish and thirsty—he has lost his appetite, and betakes himself to simple, cooling beverages, thus indieating that the rich viands, and exciting wines have lost their relish; the medical man when summoned will probably follow a similar course; he will restrict his patient to the lightest and simplest food; he will purge him well, and lower his strength, and may even order cool applications to the torturing and heated joints; in a few days the patient is better; and in a few more he is quite well under this very simple regimen, which is in accordance with the principles of allòpathia. Well the patient may be pleased, and the doctor may boast of the accuracy of his diagnosis, and of the success of his remedies; but the joy of the one and the pride of the other, says Dr. Hahnemann, will be turned into grief and disappointment:—the disease may be broken, but is not vanquished; the strength is impaired by the bleedings, and purging and low diet, and in spite of them all, the germ of the evil remains behind. As well might an army boast of a victory, when instead of attacking an enemy in front with equal weapons, and ending the dispute by death, it resorted to the ignoble stratagem of setting fire to the country in their rear, and cutting off all possible retreat; and even although an advantage is gained, the foe may be defeated, but is not annihilated; and he only requires fresh men and more arms, to burst out with more impetuosity than ever. Such is the sublime comparison and such the irresistible (at least in his own opinion) argument, by which the Doctor demolishes the doctrines of allopathia, which have taught us to employ antiphlogistic and depletory remedies in acute, and derivative and counter-irritant ones, in chronic diseases. We may remark, that in order to be able to appreciate fully the cogency of the reasoning, it is necessary to surrender all scepticism. We must implicitly receive, as gospel, whatever the Doctor is pleased to reveal, and most carefully shut the eyes, both of our bodies and of our minds, against any opposing facts. One example will be sufficient to demonstrate this. Most people have observed that chronic ailments have frequently been much relieved and even cured by spontaneous sweating, or purging; and have imitated the practice with what they deemed success; but M. Hahnemann tells him downright that this practice must invariably have a contrary effect, and encrease ten-fold the primary disease.

Readers, we caution you to beware of contradiction; if capable of an atom of such a heresy, ye are unworthy to be disciples of the great medical reformer!! But yet how can we fail to express our surprise that a single patient labouring under any disease, should ever have recovered under the murderous system of treatment which has from the earliest ages been adopted; and that the world has not by this time become altogether tenantless. Even when we have witnessed almost immediate good effects of any remedy, we now find that it has been nothing but a cheat, and a lie of our fancy. Millions of facts, exclaims the mighty German, prove what lamentable results have flowed from giving opium against diarrhœa, sleeplessness, and chronic pains; effervescing draughts against vomiting; astringents against menorrhagia; refrigerants and acids against feverish heat; and from employing ointments made with lead and zinc in cutaneous eruptions; or even from plugging the nostrils in epistaxis. Such modes of treatment are at utter variance with the principles of homoiopathia, which is truth itself.

Another great error of the vulgar school of medicine is that of employing wine, bark and other tonics, for the purpose of strengthening a patient debilitated from a chronic disease. Instead of good, they inevitably and necessarily must do mischief!! Cures indeed have been reported, but to use the sarcastic sneer of our author, they were cures, which were of no benefit to the patient.

After this it is to be hoped that we never hear more of allopathic treatment, or as it is expressed in Latin, of trying to cure "contraria contrariis."

Sometimes indeed mere chance has directed medical men to a speedy and durable cure of some diseases; but little did they know all the time that they were employing homoiopathic remedies. What are generally allowed to be specifics, as mercury in syphilis, bark in ague, arnica in the effects of contusion, and sulphur in scabies, Dr. Hahnemann pronounces to be homoiopathic, or capable of producing in the body of a person in health, the very diseases, which they are so successful in counteracting. If proofs are wanted by any of this position, we may tell them that they must remain in ignorance, for presuming to demand such from our infallible author: or if he deigns to listen to them, he will point to the good effects of applying snow to frost-bitten limbs; and of holding a burned finger to the fire.

We do not propose to enlarge upon the truth of this doctrine; for independently of all sound logical reasoning, we are told that experience, that infallible oracle, stamps it with the seal of her authority. We do not talk of the experience of those who have practised medicine according to the vulgar and erroneous notions which have hitherto prevailed, by prescribing for diseases a farrago of medicines, which would puzzle Æsculapius himself to explain. Fifty years of such experience, are so many spent in looking through a kaleidoscope, which has been constantly revolving; we see an infinity of shapes and of colours; but they pass away and we can give no account of them. A few established facts will demonstrate that it is not in the power of Nature herself to cure an already existing disease, by opposing to it another which is dissimilar in its nature, however intense and severe it may be; and that no remedies, however energetic are of any avail, if they are not homoiopathic. For example, epilepsy has yielded to an attack of tinea of the scalp; but the tinea having been cured, the epilepsy returned; the itch has been driven from the field by scurvy, but speedily re-asserted its claims when the foe retired: typhus fever has suspended phthisis, as long as the symptoms of fever lasted; mania has done the same; when small-pox attacks a patient labouring under measles, the symptoms of the latter are usually arrested, till the former has run its course; scarlatina has ceased on the appearance of the vaccine vesicle. It sometimes indeed happens that the new, or second disease, after having for a long time acted upon and infected the system, forms an alliance with the original one, in spite of their dissimilitude; but in such cases each invader has separate head-quarters and distinct encampments, and his sway is limited to particular districts; thus the pox may become of an itchy nature; and the itch on the other hand may be of a poxy nature; the two diseases being dissimilar, the one cannot in the nature of things annihilate, or cure the other, although the symptoms of syphilis are suspended when an eruption of psora makes its appearance on the skin; but in course of time the two diseases being equally strong and powerful, instead of continuing a useless warfare, establish a reciprocal union, by which they may live in the same house together, each occupying those apartments which please and suit it best. If therefore Nature fails to cure any disease by the addition of another which is of a different nature, how should men be so weak as to expect better success? Yet on such a sandy basis, has the structure of medicine been hitherto attempted to be reared; for what are allopathic medicines, but substances which have the power of exciting a morbid state in the system, in no respect like unto the disease against which they were administered. Purgatives have been prescribed for the cure of the itch; and issues have been ordered in cases of epilepsy; and we will not deny that some benefit has been thus occasionally obtained; but it is only temporary; the germ remains behind, and the baneful weed will soon re-appear.

But the result is very different, when two diseases which are similar, meet together in the system; in other words, when to a disease already existing, there is added a second of the same nature, but of greater energy; the cure is at once speedy and agreeable. Such is the homoiopathic doctrine, in the support and confirmation of which a very few examples will suffice. Variola, one effect of which is often to destroy the vision, has in numerous cases cured obstinate ophthalmiæ; asthma and deafness have yielded to the same; agues have been eradicated by vaccination; hooping-cough by measles; obstinate cutaneous eruptions by almost all the exanthemata; and long and severe asthmas and consumptions, which had owed their origin to a *psoric* taint in the constitution, have vanished as it were by a charm, when a fine crop of itchy papulæ and vesicles appeared on the surface.

It is surprising that these facts had not hitherto opened the eyes of men to the true principles of treating diseases; and that it has been reserved for a physician of the 19th century to be the interpreter of such simple and sublime laws; after such convincing evidence it is impossible for any rational medical man to persist in the absurdities of allopathia, and of enantiopathia; at least so says Dr. Hahnemann:—it will be necessary to wait a little, before all be so thoroughly convinced of their former errors as the Doctor.

Medical men have been misled, he thinks, by considering the human body as a laboratory, or place for chemical experiments, vainly and foolishly supposing that they could neutralise diseases, as they do acids by adding alkalis; or alkalis by adding acids; but we need not detain our readers any longer on this section of the book; and we shall therefore proceed to develop a few of the very original ideas of our author on various diseases. These he divides into acute and chronic; and of the former class he enumerates two orders, distinguished from each other by the difference of their exciting causes, and by their occurring occasionally and sporadically; or as epidemics and pestilences. The former are excited sometimes by improper diet, by passions of the mind, by the vicissitudes of the weather, by fatigue, &c. &c. but far more frequently by "*recrudescenses passagères*" of a latent psoric affection!! whereas the latter are dependent either on atmospheric and terrestrial influences, or on the miasmata of contagion.

The second or chronic class of diseases is thus defined.

"They are all the morbid states which give rise to a chronic miasm; their nature is such, that if not opposed by homoiopathic remedies, they inevitably become worse and worse, till they induce the death of the patient." There are only three essential and original chronic diseases, syphilis, sycosis, and psora, of which the last is by far the most important, and most prolific of distress to mankind; it is the true exciting cause of hysteria, hypochondriasis, mania, epilepsy, convulsions, and spasms of all sorts, rachitis, cancer, gout, dropsies, hæmorrhages, asthma, diseases of the eye, palsy, gravel, impotency, sterility, and a thousand other ills, to which poor man is subjected in this world below. Now as all these maladies are the effects of one poison, the treatment becomes easy, efficacious and rational. We need not therefore say much on this head; but refer the reader, who no doubt will be curious to know more about this "grande verité" to another and a still more voluminous work by the same author, "Traité des Maladies Chroniques."

After this, let us hear no more of the pompous nosologies of Sauvages, Cullen, and Mason Good! they have imposed their systems on the world too long: the classification of all diseases is now as simple as their cure. More cannot be said of the infinite superiority of the homoiopathic doctrine; it is only requisite to understand how to put its principles and precepts in practice. A few words will suffice to illustrate this part of our subject. Let us take the case of insanity; this is one of the offspring of the psoric pollution; and the ratio medendi is, to exhibit antipsoric medicines, which are enumerated and explained at the end of the book. Intermittent fevers are to be treated in the same manner. Fortunately the Dr. has published the details of two cases, which we gladly present to the readers, as we must frankly confess that we should have been somewhat puzzled to have given an adequate description of the new system of therapeutics.

Case 1. S. A. aged 40, had the following symptoms:—

1. Pungent pains at the scrobiculus cordis, on any motion of the body; felt especially on rising up, and on making any "*faux-pas.*"

2. No pain, nor uneasiness when she was in the horizontal position.
3. Could not sleep at any time, till it was eight o'clock in the morning.
4. Had a good appetite; but as soon as she eat food, she experienced uneasiness at the heart.
5. Another effect of eating was to cause the flow of a great quantity of saliva, which trickled from her lips.
6. After every time that she eat, she experienced at intervals ineffectual retchings.
7. Her character was violent and passionate—she sweated copiously on suffering any pain!!
8. In all other respects, her health was normal.

We have detailed the case as it is reported, to exhibit the proper method of describing diseases, and also with the view of shewing how beautifully and aptly the principles of homoiopathia will apply. Now, a variety of different medicines will produce the individual symptoms of the above case, but only one has the property of giving rise to every one of them; we are told, for example, that belladonna, cinchona, rhus toxicodendron, occasion prickings at the pit of the stomach; but not as with our patient *only* at those times when she moved about. The anemone pulsatilla, however, has the power of causing this symptom, when a person stumbles or makes a false step; but, unfortunately, it cannot disorder the digestion, nor make people bad-tempered, as is mentioned to have been the case, vide No. 4, 5, 6, and 7 of the catalogue of symptoms. In short, the "bryonia" is the only herb known which will answer our purpose.

In the same manner, we must carefully consider and investigate each symptom separately, and try to find out the homoiopathic remedy. The briony is such, for when given to a person in health, it will occasion every bodily and moral inconvenience enumerated above; and, therefore, it must necessarily and inevitably cure these self-same inconveniences when they are the result of disease. Having thus discovered the proper remedy, the next thing to be attended to is the dose; and as the patient was robust and vigorous, a most powerful homoiopathic dose was exhibited! Reader, do not be astonished when we tell you, that no less than one undiluted drop of the juice of the herb was given; and so rapid were its effects, that in 24 hours she had quite recovered.

Case 2.—A man, aged 42, pale and feeble, had been ill for five days. The symptoms were:—

1. At first vertigo and sickness, with frequent retching.
2. On the second night, at 2 o'clock, vomitings of a sharp acid matter.
3. On the succeeding nights, violent and distressing retching.
4. On the fifth day, he was much annoyed with a disagreeable taste in the mouth, and with offensive smells.
5. He felt as if the food lay undigested in his stomach.
6. His head was confused, and his mind irritable.
7. The slightest noise vexed him.
8. Temper mild, patient, and not easily ruffled.

Different medicines have the power of exciting one or more of the above symptoms; but the anemone pulsatilla alone can excite them all at the same time, and must, therefore, be considered as the correct homoiopathic remedy for the case. The dose ordered was half a drop of the four-millionth part of a strong drop of the expressed juice. The patient was completely cured in less than a day.

After perusing these two reports, the reader will not be surprised to hear the following announcement.

"Whenever the exhibition of a homoiopathic medicine has been judiciously made, the disease for which it is prescribed, if it be of recent origin, vanishes in a few hours—if it has existed longer in the system, the time required for a cure will not exceed a very few days, and health is restored by a transition at once rapid and insensible;" thus "belladonna" is a specific against scarlatina, both as a preventive and as a curative; "aconitum napellas" against purpura; "burnt sponge" and "sulphuret of lime" against croup; "drosera rotundifolia" against hooping-cough; "corrosive sublimate," in doses of about a twenty-millionth part of a grain, against dysentery, which may be thus cured instanter; and the "thuya occidentalis" against a disease which hitherto never has been cured, we mean sycosis!!! "These incontestible proofs of the truth of my doctrine," says Hahnemann, "cannot be more shaken by the malicious attacks, however virulent, of physicians educated in prejudices, and taught to follow the routine of the schools, than the immortal discovery of Harvey was by the base calumnies of Riolan."

The last section of the present work is occupied with a detail of the homoiopathic pharmacopœia, enumerating the drugs, the mode of preparing them, their doses, antidotes, and other particulars. We select cinchona, to furnish our readers with some knowledge of this part of the subject. The author confirms the vulgar opinion, that it may be considered almost as a specific in ague; for he has discovered that it is capable of inducing all the symptoms of this disease, if it be given to a person in health. The large doses usually administered are severely reprobated; he finds that one drop of a tincture so prepared, as to contain only the $\frac{1}{1000000000000000000000000000000}$th (we are not skilful enough in arithmetic to be able to designate the fraction) of a grain is a dose; which is often too powerful, and always sufficient to produce the special effects of the drug, and that it is very rarely necessary to repeat the dose; but it may very naturally be enquired, how are such infinitesimal divisions to be obtained; the method is simple and easy—take one grain of the medicine, and rub it very carefully together with 100 grains of sugar; then take a grain of this mixed powder, and rub it with another 100 grains of sugar, and so on, till you bring it to what our author terms the millionth power, that is, till the prepared powder contains a millionth part of a grain. On one grain of this pour a hundred drops of proof spirit, and dissolve it by shaking the bottle with two scientific turns of the fore-arm. A drop of this tincture is then to be added to 99 drops of alcohol, and shaken twice as before; and the dilution may be thus carried to any extent; but so active are some medicines, that even after such a division as defies mere words to express by language, it is found necessary to prescribe only the 100th part of a drop!! The only specimen of a formula in the whole work is very imperfect: but we shall transcribe it literally.

℞. Belladonnæ .... x. (un décillionième) 2-8th (un
dix milleoctillionième)
Globuli saccharini.. No. ij. iij. iv. vj. x. &c. &c.
Sacchari lactei .... gr. iij. Misce exacte.

With a single reflexion we shall now close this notice of the work before us; and we enquire when will vain, conceited man be satisfied with observing facts as they are presented to his eyes, and employing his memory to treasure and his judgment to arrange them! Is not this a sufficiently ample task, and one which is sufficiently noble for him? Why does he go on to turn and twist the simplest truths to suit some idle fancy of his brain? why does he bend what is straight? why does he darken what is clear? The humblest and homeliest mind, unfettered by prejudice, will often make greater progress in the search after truth than he who has been educated in all the mysteries of scholastic wisdom; for the one is content to plod his way on the great high road, while the other, seduced by a flower or a butterfly, loses himself in the entanglements of some bye-path. We cannot too urgently impress upon all medical men the importance of collecting much and building little;—at best ours is an uncertain science; and its uncertainty must be a thousandfold increased by the spirit, now so much abroad, of its votaries, struggling to frame some cobweb hypothesis from partial and insulated facts. Is it not far more worthy of a philosophic mind diligently and studiously to examine Nature's ways; to note down facts as they occur; to mark how they stand to each other, whether they are uniform in their precedence and sequence, or whether they appear to follow each other accidentally; to assemble all and exclude none; and when we attempt, which ought, however, to be seldom, to arrive at the discovery of a general truth, or, what is foolishly termed in medicine, a proximate cause, to deduce it from a host of phenomena observed at different times, in different places, and by different men. It is from want of attention to this maxim of true wisdom, that every petty mason of our craft aspires to be a master architect, and thus, instead of one great, and solid, and solemn edifice for the enshrinement of our goddess, there are numberless puny hovels, confusedly scattered—reared one day to be blown down the next. "The object of medicine," we use the words of our author, who, while he himself indulged in such fantastical and whimsical reveries, nevertheless could see the absurdity and error of others, "does not consist in framing systems out of empty ideas and hollow hypotheses on the essence of the vital principles, and on the production of diseases, or in vainly seeking to explain morbid phenomena, by drowning all common sense in an eddy of unintelligible words and by a parade of useless observations and experiments, which may impose on the ignorant, but will not relieve the sufferings of the distressed. We have enough of these scholastic follies, dignified by the name of theory of medicine, and enshrined in the chairs of universities and colleges. It is now high time, that whoever calls himself a physician should cease to deceive mankind by unmeaning jargon, and begin to act—to mitigate woe, and to effectually cure disease."

IX.

THE ANATOMY OF THE THYMUS GLAND. By *Sir Astley Cooper*, Bart. F.R.S. Serjeant Surgeon to the King, Consulting Surgeon to Guy's Hospital, &c. Quarto, bds. pp. 47; five lithograph Plates, price 14s. Longman's, London, 1832.

It requires no gift of prophecy to predict that Sir Astley Cooper's name will go down to posterity as the brightest, we say advisedly the very brightest, ornament of the science of surgery of the present century. We fear not the accusation of flattery in making this assertion, for such an accusation would be repelled by the body of the profession. The sin, the besetting sin, of the members of our profession is avarice, the sordid thirst of fees. For gold they sigh, and for gold they toil; ambition, "the last sin of noble minds," is with them but the lust of wealth, and place and pension are coveted but for it. When that is obtained, when age has destroyed the power, but not the wish, of obtaining more, when patients pass the door and crowd to the levee of another, the physician or surgeon, fashionable once but deservedly neglected now, sinks from the scene unhonored and unregarded, contemptible and contemned. The man of the world may smile at this, and may find in his pockets a refuge from contempt. Be it so. The consciousness of deserving the thanks of posterity, and the reception of the honest and hearty approbation of those of his own time, whose applause is sincere because it is unbought, gratifying because it is merited, and influential because it is equally bold and pure, must inspire in a generous mind such a train of feelings as would not be bartered for the gems of Peru. And let not the worldlings deceive themselves; a change is coming over our social and political relations, our public and our moral feelings, that will lessen most materially the influence of family and of faction, that will make even fees less accessible to the fingers of those who rely on such influence for their acquisition, that will give to industry, without interest, a fresh stimulus and a brighter prospect—to the press, that is to the symbol and the expression of public opinion, a higher power—to intrigue a narrower sphere—and to ingenuous emulation, and the passion for honest fame, a more brilliant guerdon.

These reflections have not inaptly been excited by the contemplation of the career of Sir Astley Cooper. Let would-be aristocratic doctors say what they will, he has proved himself an honour to the profession, nor do we feel shame in proclaiming it. To have been the most successful surgeon is little, for success might be owing to art or accident, or both. But to have written *the best book* on hernia—*the best book* on fractures and dislocations—*the best book* on the diseases of the breast—*the best book* on the diseases of the testis—and to have delivered *the best course* of surgical lectures, is no common honour, or series of honours. Sir Astley Cooper has devoted great attention to the anatomy of parts concerned in hernia, to the anatomy of the spleen, to the anatomy of the testis; and now we find him patiently, skilfully, and successfully investigating the anatomy of the thymus gland. Sir Astley Cooper has spent a youth of labour—is he spending an age of ease? We hesitate not to say that he is; we hesitate not to affirm that, to a mind like that of Sir Astley Cooper, useful, active, honourable professional employment is ease, satisfaction, delight. Such a mind would be corroded in a twelvemonth by the rust of sloth, would be gnawed Prometheus-like by the vulture of inaction; such a man would be miserable, nay he would not, could not exist, unsupported by the knowledge that he was working for the benefit of his species.

Sir Astley observes, that it is almost unnecessary to say that the subject is deserving of attention; "for every portion of the animal body, however minute, should be carefully traced and accurately known." Sir Astley commences with the description of the thymus gland in the fœtal calf, in which it appears that its form and dimensions are such as to render it very apt for examination. As our space, at this late period of the quarter, is too limited to allow of more than a brief review of the work, we must pass at once to the anatomy of the thymus in the human fœtus. We may state, however, for the benefit of those who are inclined to pursue the investigation, that the gland in the lamb and calf is more easily investigated, and made into preparations, than that of the dog, kitten, ass, pig, or any other animal examined by Sir Astley.

THYMUS GLAND IN THE HUMAN SUBJECT.

"This Gland is formed of a thoracic and a cervical portion on each side. The former is situated in the anterior mediastinum, and the latter is placed in the neck just above the first bone of the sternum and behind the sterno hyoidei and sterno thyroidei muscles.

Between two and three months of fœtal life, as will be seen in the plate, it is so small as to be but just perceptible.

At three months its increase is in proportion to the relative magnitude of the fœtus, and thus it continues to grow gradually and equally to the seventh month, when it enlarges out of proportion to its former growth.

At eight months it is large, but at the ninth month has undergone a sudden change, becomes of great size, and is said to weigh half an ounce, from which circumstance, however, on account of the cavities which it contains and the varieties to which it is subject, no judgment of its bulk can be formed.

It increases after birth, and continues large to the first year, when it slowly disappears to the time of puberty; and in after age it ceases to have cavities, and becomes a body of very small dimensions." 19.

Sometimes a third thoracic lobe exists joining the other two, yet admitting of their separation under a careful dissection. Sir A. has seen the vena innominata pass through the gland, and he has seen it placed anteriorly to the cervical lobes. Its form is subject to considerable variation; the left gland is often larger than the right.

After giving a clear and accurate account of the relative situation of the gland, and of the fascia of the thorax, that fascia which may be said to form the roof of the thoracic cavity, as the diaphragm constitutes its floor, our author proceeds to the composition of the thymus.

It is formed of two distinct bodies, which may properly be called a right and left thymus gland. It is connected to the surrounding parts by an envelope of coarse cellular membrane, fixing it and uniting its two portions.

"When this membraneous covering is removed, the substance of the Gland is exposed, which is found to be of the conglomerate kind, being formed of numerous lobes which are connected together by a second covering of reticular tissue uniting the lobes to each other, and combining its parts by entering minutely into its interstices.

The lobes of this Gland differ in magnitude, but not one of them appears to be larger than a pea, and they vary from that of the head of a pin to the size above-mentioned. When the form of the Thymus is strictly investigated, the lobes are found to be disposed in a serpentine direction around a cavity hereafter to be described.

The Gland may be unravelled and it will be discovered to be composed of a rope on each side, of which the right and left Thymus is constituted, and on each of these the large lobes form knots, and it appears like a necklace of beads, but even these lobes may be still further separated.

In order to succeed in unravelling the Gland, it is necessary to divide the arteries, veins, as well as a mucous membrane, to be described hereafter, as the arteries, veins and membrane unite the lobes to each other to give them a serpentine course, to shorten the Gland, and to lessen the space which it would otherwise occupy.

These ropes are disposed in a spiral course around a central or nearly central cavity, and this disposition of them is preserved by the arteries, veins, and mucous membrane, by the division of which the ropes are unravelled.

The spiral rope which constitutes the Gland on the right side has no communication with that on the left, although the two Glands are combined into one by cellular tissue, yet in its usual formation, the glandular structure continues entirely separate.

In order to distinctly observe the rope, and to unravel it satisfactorily, it is necessary to dissect it, in part, in water, and then harden it in alcohol, when the dissection may be minutely pursued, and the lobes and their communicating portions be preserved and readily demonstrated.

This rope or chain of gland is composed of lobes of different sizes, connected together by membrane and by smaller portions of gland which surround a large internal cavity.

To proceed with the investigation of the structure of this Gland, remove a very thin superficial slice of each lobe, or of several of these, and numerous little cavities will be seen which may be set open after the organ has been hardened in spirits of wine, and these are the secretory cavities or cells producing the fluid which issues so abundantly.

The lobes being further examined, beside their cells, are found to contain a small pouch at their bases, which leads into a reservoir, so that the secretion which escapes from the lobes finds a ready entrance into the cavity of the Gland, from which it may be absorbed.

If a pipe be introduced into the Gland, and alcohol be injected, and the organ immersed in strong spirits, or a solution of alum, a large cavity will be filled, which I shall call the reservoir of the Thymus.

This reservoir forms a general communication between the different lobes; it begins from the inferior part of the thoracic portion, and extends from thence into the extremity of the cervical.

The reservoir does not maintain a straight course, but passes spirally, or in a serpentine direction, through the thoracic part of the Gland, and is somewhat more direct in the cervical portion.

With regard to its size, it varies in different places, but generally is the largest near the centre of the thoracic, and it is least at the communication of the cervical with the thoracic part of the Gland.

In the cervical portion it increases, but is less than in the thoracic, yet it still may be distinctly traced.

When opened, after having been injected and hardened, its internal surface appears to be lined by a smooth membrane; but if it be at once dissected in water, this lining membrane is found to be of the mucous kind, for it is rather villous than smooth, and instead of having a few red vessels, when filled with a vermillion injection, it is found to be highly vascular, and the arteries which are distributed to it may be seen meandering upon its surface and minutely dividing so as to redden every part of it.

Its interior forms ridges, which are produced by small ligamentous bands, which cross the surface of the reservoir in various directions and encircle the mouths of the pouches; these bands are formed for the purpose of keeping the lobes together, of preventing an injurious yielding of the parietes of the cavity, and to give strength to resist too great an accumulation of the secretion.

When the reservoir is floated in water, a number of small openings appear upon its internal surface, and if a probe be introduced into these, it passes into the pouch at the roots of the lobes, so that by these apertures, the secreted fluid escapes into the reservoir.

These orifices are not so numerous as the lobes themselves, the reason for which is, that each pouch communicates with more than one lobe.

The boundaries or walls of the Gland are full of secretory cavities or cells, which are extremely minute; they communicate with each other and open into the pouch of the lobes, and from the pouch into the reservoir." 30.

Sir Astley gives directions for injecting and preparing the gland, for which we must refer to the work itself.

With respect to the arteries. Each thoracic portion is supplied by a branch of the internal mammary, which passes to the inner side of the reservoir, and is distributed to the mucous membrane and glandular structure. The other principal artery of the thymus is sometimes derived from the superior thyroid, sometimes from the inferior; it is distributed to the cervical portion, and ultimately anastomoses with the branch from the internal mammary. These arteries besides supplying the gland with blood, serve to combine the lobes, for until they are divided the ropes cannot be unravelled. The principal *Venæ Thymicæ* end in the vena innominata, though small branches pass to the internal mammary and thyroidal veins. Sir A. has only been able to inject in the human subject the absorbent vessels proceeding from an absorbent gland of the thymus. Absorbent glands are found at the upper part of the sternum in the mediastinum; a small gland is also found between the thoracic portions, and some at the junction of the thymus with the jugular and subclavian veins, where the principal trunks of the absorbent vessels at all periods of life terminate. The advantages of comparative anatomy are here evident, for in the fœtal calf Sir Astley is able to fill with coarse injection two large absorbent trunks, passing nearly directly downwards on the posterior surface of the glands, converging on their approach towards the sternum, and terminating in the jugular veins at their junction with the superior cava by one or more orifices on each side.

The nerves of the thymus are very minute. They are probably derived from the superior thoracic ganglion of the sympathetic and the phrenic. Sir A. has seen a filament from the junction of the nervus vagus and sympathetic pass on the side of the thyroid gland to the thymus.

Physiology of the Thymus Gland. It is more than probable that this gland performs an office of some consequence in the fœtus. Hewson thought that it formed the internal part of the red globules of the blood, and that it was an appendage to the lymphatic glands, to which he considered it similar in structure and use. The former idea is pure fancy; the latter is demonstrably not the fact. Let us look at the secretion of the gland.

"It has been already stated, that this Gland secretes a great abundance of white fluid; that it is situated between the veins in which the great absorbent ducts of the body terminate; that to each cornu is attached a large absorbent duct in the fœtal calf, capable of being filled with coarse injection, and that this vessel terminates at the junction of the jugular veins in the vena innominata.

This fluid, although constantly found in the human fœtus, having the appearance of chyle, viz. white like cream, but with a small admixture of red globules, is not easily procured in sufficient quantity to make it the subject of chemical analysis; but from fœtal calves, two or three ounces may be without difficulty collected, and an abundant opportunity afforded of ascertaining its composition.

The best mode of obtaining it, is, by cutting the Gland into very small pieces, and placing them upon gauze, which being squeezed, the solid is separated from the fluid part, and the latter escapes through the gauze.

The Thymus should be previously immersed in water to deprive it of its blood.

The fluid thus collected from the calf, has the appearance of cream slightly tinged with blood, and to the eye, has the character of chyle.

Warm water dissolves a large portion of it.

Heat readily coagulates it.

Alcohol coagulates it.

Sulphuric Acid not only coagulates, but chars it.

Nitric Acid coagulates it firmly, first turning it white, and then yellow.

Nitric Acid diluted, precipitates a white solid from its solution in water, giving it the appearance of milk.

Muriatic Acid coagulates it firmly, and turns it white.

Liquor Potassæ converts it into a muco albuminous matter, which falls, in long extended threads, like the saliva in Ranula, and gives it much the appearance of white of egg." 39.

Collecting some of the secretion from the calf, Sir Astley sent it to Dr. Dowler of Richmond, already very favourably known by a paper in the Medico-Chirurgical Transactions (Vol. XII. Part I.) *On the Products of Acute Inflammation.* Sir Astley did not inform him of the nature of the fluid, but merely requested him to analyze it. The following was his reply.

"My Dear Sir Astley,—The fluid consists of the following substances, and which are placed in the order of their proportions.

100 parts contain 16 of solid matter. Incipient fibrin. Albumen.

Mucus and muco extractive matter. Salts consisting chiefly of muriate and phosphate of potash and phosphate of soda.

Of phosphoric acid a trace.

That the method of examination might be as unobjectionable as possible, the employment of active chemical reagents was avoided.

It was ascertained that the presence of the very minute quantity of free acid destroyed the affinity of the fibrinous particles for each other, for as soon as the acid was either saturated with an alkali, or further diluted with water, they then adhered together.

A portion of the fluid on being dropped into two or three times its weight of water, and gently stirred about will unite with a part of it, and after a short time be converted into a gelatinous looking mass. This mass consists of a solid and of a fluid part, and which may be separated from each other by mechanical means.

It is only necessary to inclose it in a fine linen rag, in such a manner that the latter may form a kind of loose bag around it, and then to gently rub portions of it between the finger and thumb, so as to break down the reticular tissue which retains the fluid portion. The bag must be occasionally gently pressed or carefully twisted, so as to separate this portion as it becomes liberated; towards the end of the process more force may be used.

On opening the bag a viscid looking substance will be found, which when further pressed and dried, bears a close resemblance to ordinary fibrin, both in its chemical and physical properties. The linen bag used for the separation of the fibrin absorbs a quantity of the fluid part containing other animal matters. These must be separated by means of water, and added to the portion that had already passed through it; when sufficiently concentrated under an exhausted receiver the albumen may be coagulated by heat, and in this way separated from the other animal and saline substances.

The other steps of the examination may be conducted in the usual manner.

I am sincerely yours, Thomas Dowler." 42.

If the fluid be examined in the microscope it is found to contain an immense number of white particles. The muco-extractive matter is probably derived from the mucous membrane lining the reservoir and secretory cavities of the gland.

"It appears to be an error to suppose that this Gland continues for some time after birth to perform the same office as that which it supported in the fœtal state.

I injected the Gland in a child of one month, and I found that the lobes had become quite thinned by absorption, although the reservoirs in part remained, but even one of these was partially obliterated. In a child of four months the reservoir was very small, broken into several portions, and the weight of the Gland which should have been in the fœtus of nine months 240 grains, weighed only 45 grains, or about five times less than in the fœtal state.

In a calf of four months, the Gland is very large, yet the cells and reservoirs will not receive one half of the injection which will enter in the fœtus of nine months.

I will therefore put the following query.

As the Thymus secretes all the parts of the blood, viz. albumen, fibrin and particles, is it not probable that the Gland is designed to prepare a fluid well fitted for the fœtal growth and nourishment from the blood of the mother before the birth of the fœtus, and consequently before chyle is formed from food, and this process continues for a short time after birth, the quantity of fluid secreted from the Thymus gradually declining as that of chylification becomes perfectly established?" 44.

It appears to us that there is one objection to this idea. The secretion of "all the parts of the blood" is formed from the blood itself, and we have no satisfactory proof that the fluid secreted in the thymus, and transmitted into the venous system, is more fitted for nourishment than the arterialized blood from which it was produced. Arterial blood is the pabulum of life, and we know of no parallel instance in which a fluid, of more nutritious powers for the animal itself, is formed in and by that animal's organization. But we may be in error, and we leave Sir Astley's suggestion to the consideration of the profession.

Disease of the Gland.

"Parts which have ceased to perform their functions, as the mamma after menstruation and parturition, so frequently degenerate into diseased changes that morbid affections of this Gland might be expected to be frequent, yet in the course of more than forty years' experience, I have only witnessed one example of it.

Varieties in size are of common occurrence, but diseased changes of structure are extremely rare.

The following case occurred many years ago.

I was requested to visit a young person 19 years of age, who suffered under so severe a dyspnœa that it was with great difficulty she could remain recumbent for a few minutes, and if a short period of repose was obtained, she started up with a sense of suffocation, and for several seconds struggled violently for breath.

Upon enquiring into the cause of her suffering, I found a swelling which occupied the inferior part of the neck at the upper opening of the thorax, which projected above the clavicle upon each side, and as I supposed arose from an enlargement of the absorbent Glands at the termination of the jugular and subclavian veins.

The swelling had existed for many years, but of late suddenly increased. I ordered leeches to be applied, her bowels to be opened, and on the following day she was somewhat better, but another day brought with it not only her former, but still more aggravated sufferings; I then advised a blister to the upper part of the sternum and to the swelling in the neck, desired the cuticle to be removed, the part to be dressed with the unguentum hydrargyri, and directed her to take calomel and opium, which she accomplished without much difficulty, as her deglutition was less affected than her breathing.

The means which I recommended gave her only slight temporary relief, and she became daily weaker, her legs were œdematous and she was unable to get any rest, but in the sitting posture, and then only with her head inclined forwards, and supported in that position by her sisters: for the moment it fell back, the pressure of the tumour on the trachea and the dyspnœa were suddenly increased.

I witnessed her making daily approaches to dissolution, without being able to afford her any permanent benefit: she died after a fortnight, not from any sudden attack of suffocation, but from being worn out by the constant irritation excited by the difficulty in respiration.

I obtained permission to examine the body, and found the disease was situated in the Thymus Gland; the swelling reached from the curvature of the aorta to the lower part of the Thyroid Gland, and the latter was also considerably enlarged.

The Thymus appeared of a yellowish white colour, and was divided into several large lobes.

The trachea was involved in the tumour, and its sides were compressed by it, so that its transverse diameter was somewhat diminished. The arteria innominata was placed behind it, and the left subclavian, and left carotid arteries to its left side, it surrounded the vena innominata, and upon cutting into the vein, the diseased Gland was found projecting into its cavity, and upon making an incision into the swelling, the reticular texture of the Gland was found to be filled by a white pulpy substance.

In this case, the complaint was compounded of a diseased growth of the Thymus and of Bronchocele, or an unnatural growth of the Thyroid Gland. The latter is so placed that its enlargement little endangers suffocation, because the surrounding parts can yield to the pressure of the swollen Gland; but as the Thymus is situated in the thoracic opening, in its enlarged state it soon reaches the sternum and first rib, by which it is bound, and therefore, its increase is towards the trachea, which becomes enveloped by it, and its function interrupted in consequence of its compression.

The disease appeared to be of the Fungoid kind." 47.

The preceding quotation terminates the work. After the observations which we made at the commencement of this article, we need say no more. We repeat our earnest wish, that the able and worthy author may long be spared to complete his career of useful investigation, and that the present will not be the last occasion, as it has not been the first, on which it becomes a duty to pay a well-merited tribute of applause to Sir Astley Cooper. The present work should be in the possession of all the medical book societies, as well as in the libraries of those who can afford to purchase standard productions.

Periscope;

OR,

CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

I.

Injection of Water into the Veins in a Case of Hydrophobia.*

A boy, of the name of Ménard, was brought to the Hôtel Dieu with all the signs of confirmed hydrophobia. The paroxysms occurred, as usual, at intervals, and were very severe; the pulse was very frequent, without force; the respiration not difficult; the eyes wandering; the mouth frothing; the countenance inexpressibly anxious. Large bleedings had been practised without any benefit, and at 9 o'clock, M. Sanson proceeded to inject warm water into the veins of the patient, as M. Magendie had previously done in the case which, at the time, excited so much attention in Europe.

The left radial vein was chosen for the operation, and an assistant having fixed it by pressure in the middle of the arm, and rendered it dilated below the point compressed, an incision, an inch and a half in length, was made on it, parallel to its long axis. It was then seized with a pair of forceps, and a longitudinal incision, two lines in length, made into it. The assistant's finger restrained the hæmorrhage, when the operator, raising the upper end of the vessel with a pair of dissecting forceps, introduced into the aperture the pipe of a very delicate syringe, containing nearly eight ounces of distilled water, at the temperature of 25 to 28 degrees. On attempting to throw in the fluid, it was found to be thrown into the cellular membrane of the limb. The pipe was, therefore, withdrawn, the syringe re-filled, and re-applied with more success; four ounces of fluid being injected with facility. The instrument was then removed, and the lips of the wound brought together as usual. During the operation, the young patient was much disturbed, but less so than before, and immediately after its completion he fell into a state of calm, which continued till his death, interrupted only by some slighter convulsions, which followed a bleeding at 10 o'clock. From this moment the pulse became more frequent and weak, respiration more difficult, deglutition almost impossible. In this state, after a few minutes' quiet, he expired.

This case can hardly be looked on as conclusive against the powers of aqueous injections into the veins in cases of hydrophobia, and yet it will have its weight in preventing enthusiastic persons from leaning much on M. Magendie's proposal. That proposal has so little, in the way of reasoning, to recommend it to serious attention, or, at least, to excite much expectation of success, that every practical failure in its application contributes most heavily to sink it. By the way, we may here mention a circumstance which is remarkable in itself, but more curious, as evincing some of those national characteristics peculiar to the French nation. When we have described the circumstances, our readers will perceive that the characteristics to which we more especially allude, are that enthusiasm, and almost reckless daring, which have rendered the terms of Frenchman and courage almost synonymous. We willingly pay this tribute to those, whom absurd and ignorant prejudice has still styled natural enemies, when they should have been embraced as natural neighbours.

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* Bulletin Général. Paris, 1831.

It appears, then, that the bóy whose case forms the subject of the present notice, whilst suffering in one of the hydrophobic paroxysms, seized a piece of cloth, and, thrusting it into his mouth, was in imminent danger of suffocation. M. Caillard, resident physician of the Hôtel Dieu, boldly put his hand into what most men would çonsider an awkward situation, extricated the boy from his present danger, and reserved him, cruelly perhaps, for equally certain, though more tedious destruction. In executing this object, the boy inflicted a deep bite on the thumb of the right hand; the wound was immediately cauterized by the hot iron. This gentleman seems to pay no regard to the wounds inflicted by the rabid of his own species. Some little time ago, he overpowered two hydrophobic patients whom none would venture to touch, and received a bite in the finger from one, who had made his escape over the roof of the Hôtel Dieu, but was followed and brought back by M. Caillard. The latter experienced no bad consequences from that injury, and, we trust, will suffer none from the more recent. Another circumstance is mentioned, which we cannot pass without remark. An amateur of experiments had inoculated ten dogs with the hydrophobic virus, and having made them as mad as could be wished, became naturally desirous of getting rid of them. Now most men would have despatched such animals as speedily, or, at all events, as securely as possible; but this philosopher, disdaining such common-place precautions, ties them up loosely in a bag, and commissions a poor wretch to throw them into the Seine. The man, little dreaming what a cargo he is carrying, stops at an auberge to take some wine, and eases himself for a minute of his load. The dogs escape from the sack, and the *experiment* is concluded by sixty-four persons being cauterized, at the Hôtel Dieu, for wounds inflicted by them, and ten, actually ten, *dying* in that institution of hydrophobia! Has the law in France no means of punishing such atrocious carelessness, or rather callousness? We cannot refrain from observing, that the proportion of ten deaths is very large, and not particularly creditable to the cauterizing practice. Two or three persons are annually received into the Hôtel Dieu, affected with hydrophobia; they most commonly die at the end of from twenty-four to forty-eight hours.

II.

ARTERITIS.

INFLAMMATION of the arteries may be said to be little understood, and morbid anatomy being much cultivated at present, whilst the study of symptoms and of pathology, in its comprehensive sense, is by no means neglected, some powerful reason must exist for our ignorance upon the subject. Perhaps attention has hitherto been too little directed to it, and the investigation has not been followed up with that unity of purpose and perseverance, which are requisite for the elucidation of any thing at all enveloped in obscurity. But much, and probably the greater difficulty, must be attributed to circumstances connected with the question itself, to the fact, that the arterial tunics are not prone to extensive acute inflammation, and that the changes produced in them by old age are with difficulty distinguished from the results of chronic inflammation. In our review of Mr. Guthrie's able work, we have touched on this disputed point; but, in the present state of our knowledge, we would be far from wishing to maintain opinions pertinaciously, and no one should decide upon grounds not perfectly supported and consolidated by evidence. In the second number of the Cyclopædia of Practical Medicine, there is an article on Arteritis from the pen of Dr. Hope, of which we shall take a short notice.

On acute arteritis we have little that is satisfactory; a compiler cannot collect more than is known, or rather than has been written; and if knowledge is scant, a compilation cannot increase it. The redness of the inner tunic or tunics of an artery, which is often thought and said by ill-informed persons to be inflammatory, but which really is not so, is distinguished from the vascularity which has better claims to be considered the result of inflammation. Were we to attempt to define, we should say that the non-inflammatory redness has the properties of a *stain*, the inflammatory those of vascular *injection*. And observing men will find that the cases of the latter are passing few, at least we have not witnessed many. We recommend a rational scepticism in these investigations. The most unequivocal symbol of inflammation is lymph, and if lymph be present on the inner tunic of the artery, we may conclude that arteritis has really existed. We may conclude so if lymph is really present, but our readers should be aware that they are exposed to a fallacy. The fibrine of the blood when adherent to the sides of an artery or vein, has many of the appearances of coagulated lymph, nay, is with great difficulty distinguished from it. In persons dying after severe inflammatory affections, in which great depletion has been used—for instance, after pericarditis—or from long-continued chronic disease, by which the vital powers are brought low, and for some time maintained so, we occasionally observe a very curious condition of the veins of one of the lower extremities. As it seems to us to illustrate the present subject, we may here allude to it. For some days then before death one of the lower extremities swells considerably, and becomes œdematous, sometimes with great pain in the limb affected, sometimes with little or none; occasionally this state attracts no attention during life. On inspection after death, the femoral, and perhaps the iliac, vein is found completely obstructed, and the same is the case to a greater or lesser degree with their branches. The veins appear large and knotted, but the coats present externally no redness, at all events no injection. On opening the vessel, its interior is found filled with a darkish brown substance, which has partly the appearance of coagulum, partly that of lymph. It is disposed to be laminated, adherent to the sides of the vessel, in its centre softened, like those coagula in the heart which are semifluid in their interior, and are incorrectly said to contain pus.

Now we have seen these cases viewed as instances of phlebitis. We are by no means satisfied that they are so, and for these reasons. In undisputed examples of phlebitis there is more unequivocal coagulated lymph, less coagulum, and always more or less thickening of the coats, or deposition of matter so organized that it is difficult to separate it from the venous tunics. Besides, in acute phlebitis, there are usually geral symptoms of a typhoid or peculiar character, which, so far as we have seen, are absent in these cases. The circumstances attending the latter, resemble those accompanying the altered coagula in the heart;—a long and debilitating malady, by which we may suppose the powers of the circulating system weakened, and the disposition of the blood to coagulum increased—the act of dying generally protracted and the struggle tedious—the occasional absence of all local pain or uneasiness, and the deficiency of the general symptoms of phlebitis, so obscure to those who are not, and so characteristic to those who are acquainted with them. Be this as it may, the appearance of the matter in the vein—blood or lymph—is in all respects analogous to that of the pseudo-abscesses in the heart, which were once like these considered inflammatory, but are at present generally acknowledged to be merely altered coagula.

We think that this digression will shew that the presence of lymph in the artery is not so easily determined as it might seem to be; and that conclusions must not be jumped at too hastily, on observing the adhesion of "plastic pseudo-membranous lymph" to its sides. Another consequence of inflammation is ulceration, and the latter may be thought very frequent. Fissures of the ulcerated character are indeed very frequent, along with the deposites between and in the coats, more particularly with the scales of calcareous matter. But independent of these they are extremely rare; independent of the presence of morbid alterations in the coats, we never saw an instance of them. "Small pustules filled with pus sometimes, though rarely, present themselves under the internal membrane of the aorta, and burst into its cavity." Laennec thinks very reasonably that they originate in the cellular tissue of the vessel. Here then we see how uncommon the unequivocal results of inflammation are, how equivocal the common proofs of it.

Arteries are undoubtedly susceptible of inflammation limited in extent, and in degree. They exhibit the adhesive inflammation after wounds, injuries, ligatures, in the neighbourhood of suppuration, ulceration, sloughing. Arteries also ulcerate with the soft parts, and they slough with them. But it may be observed that these morbid processes are not in themselves dangerous, but rather sanatory—that the vessels affected are usually the vessels of the part implicated, and no others—and that coagulation of the blood in the vessel is the ordinary precursor both of its adhesion, ulceration, or death. These, though examples of inflammation in arteries, can hardly be viewed as examples of acute arteritis, taken in its broad and fair signification.

But the gravest cases of arteritis are to be noticed, and we think they deserve more than the paragraph which Dr. Hope has bestowed upon them. It is true that they are witnessed more frequently by the surgeon than by the physician, and this offers an example of the inconveniences which arise from articles of this description being confided to one individual. With a show of exactness and completeness they are deficient in both, for no physician can be properly acquainted with portions of surgical knowledge which are rather the possession of a few experienced men, than generally given to the world in books.

There is good reason to believe that however limited and free from danger inflammation of arteries usually is, cases do occur of a more formidable character. The inflammation spreads extensively and towards the heart, is said to assume the erysipelatous form, and too commonly proves fatal to the patient. The following quotation is taken from Mr. Guthrie's able work on the diseases of arteries; it is short and to the purpose.

"I have alluded to one case of this kind in my work on Gun-shot Wounds, page 96, third edition. The patient died suddenly and unexpectedly, the limb was greatly swelled and gorged with blood, the femoral artery, when opened, appeared more vascular than is commonly observed, its internal membrane was very red, and easily separated from the middle coat, and the fluid which lubricated its surface was of a more serous nature than usual, and greater in quantity. The other two cases I did not see until death was impending. In each, the right leg and thigh were greatly swelled and œdematous; the skin was of a pale dead white colour; the countenance was extremely anxious and bedewed with sweat; the pulse 140 and weak; the patient sensible, and expressing hopes of recovery. In both cases the arteries showed the same character of disease, which extended upwards as high as the diaphragm. I gave a portion of the femoral artery taken from one of these cases of disease to Mr. Brookes, who considered it to be one of the finest specimens of arteritis he had ever seen. The symptoms which mark this state of disease, when distinguishable, and several cases are recorded where the appearances described have been noted, are a very quick pulse, a rapid deterioration of the state of the patient, and degeneration into irritative fever, with low delirium, followed by death.

In the three instances which I have mentioned, the erysipelatous inflammation of the arteries was evidently caused by continuity of parts with those already inflamed; and in all of them the inflammation was a deep-seated disease, situated in the muscles and internal structure of the thigh, the skin being apparently unaffected."

It will be observed that the foregoing extract by no means conveys an unexceptionable idea of either the morbid characters, or nature, or progress of acute arteritis, if such it was. It is probable that arteries should be subjected, like other tissues, to acute and severe inflammation, and it is more than probable that, if so affected, the result would be fatal, or at least problematical. Yet we think our readers will agree with us, that hitherto our information is very scanty, and that cautious men must hesitate ere they subscribe to this or that position respecting the symptoms, nay, existence of the disease. One of the least dubious cases of arterial inflammation of which we have heard, was related by Mr. Brodie, in his surgical lectures.

Case. A man was walking on a hot day in the fields of Brompton, when he was seized with violent pains in the limbs, one of which was affected more severely than the other. The foot of that side mortified, and became dry, hard, and horny; in short, was attacked with dry gangrene. The mortification reached the middle of the thigh, where, there being much flesh, the parts became moist and putrid, and the mortification was arrested; but the man died. On dissection, both artery and vein were found inflamed from the middle of the iliacs to the middle of the thigh; there was an effusion of coagulable lymph in the interior, and there was lymph also in the cellular membrane.

Another case of a similar description was also mentioned by Mr. Brodie, but the patient having recovered, the presence of lymph in the artery is not so certain. The case is interesting, and we shall mention it.

Case. A young woman was seized with pain in the groin, extending downwards in the course of the femoral artery, and upwards into the abdomen. The foot became affected with dry gangrene, but the mortification stopped in the middle of the thigh, separation down to the bone took place, Mr. Brodie sawed through it, made a good stump, and the young woman did well.

In the notes that we possess of the lecture from which these cases are extracted, Mr. Brodie is made to remark, that "he has seen a finger attacked in the same manner, and mortify in a single night. Saviard amputated in one of these cases, and there was no vessel to be tied, for all were choked up."

These cases differ from the mortification of old persons, in which the coats of the arteries are rigid, diseased, their cavities diminished, the heart perhaps unsound, the circulation certainly very feeble. In such, sudden coagulation of the blood in a vessel of an extremity, and consequent gangrene, is not uncommon.

We suppose that, from what has been said of acute arteritis, we may save ourselves any trouble respecting the symptoms and diagnosis. Of what use is it but to mislead, to affect a knowledge which we really have not, and to lay down the symptoms of the disease, of the very existence of which we are scarcely certain—symptoms which are in some measure speculative, in some measure false—symptoms which belong to other affections, even if they belong, as is not certain, to this! The same thing may be said of the treatment; the hare must be caught before it can be cooked.

As, in our review of Mr. Guthrie's work, we entered on the consideration of chronic arteritis, we cannot resume it here. If, in this article, we have rather discouraged pretensions to a knowledge of the nature of arteritis, it is not to repress, but to stimulate enquiries—to make us dissatisfied with a state of half information, half ignorance, in order that we may eagerly endeavour to attain positive knowledge. And we think it is more philosophical to sin on this side, than on that of confidence and easy faith. We cannot conclude without expressing our opinion, that Dr. Hope has executed his task with zeal and learning.

III.

MESSRS. GREEN AND S. COOPER ON FRACTURE OF THE CERVIX FEMORIS WITHIN THE CAPSULE.*

THE disputes which have been agitating the surgical world for some years respecting the possibility of union of fractures of the neck of the femur within the capsule appear to be dying away. Both parties seem weary of the contest, and each is willing to relax a little from his ultra opposition to the other. On the whole, however, the union-party have rather the best of the argument, at least of the facts, for they have managed to bring forward some which cannot be readily disproved. Sir Astley Cooper, however, never asserted that union in these fractures was impossible, and the very few unexceptionable examples of it adduced by his opponents, may be said to be proofs of the general soundness of Sir Astley's opinion. Mr. Green's sentiments on this subject are as follows :—

"Now, gentlemen, whatever be the causes of it, the fact is, at all events, clear, that universally, I may say, fractures of the neck of the thigh bone within the capsule, are deemed to be incapable of ossific union. Dr. Colles, of Dublin, who has paid great attention to this question, has placed on record the appearances which presented themselves in dissection, in a considerable number of fractures of the neck of the femur. Sometimes union was formed by ligamentous bands, longer or shorter. Here is a specimen of a similar union, where you may observe the ligamentous bands to be very short, indeed, so much so, as to be capable of maintaining a permanent attachment between the broken parts. Next, Dr. Colles found instances in which the neck of the bone was absorbed without any union. He found, however, in the lower portion of the fractured bone, deposits, forming a case — and sometimes acting like a splint in supporting the neck. Thirdly, he says that the broken surfaces present patches of ivory-like deposits, that they move upon one another; and that thus, in some measure, support is maintained.

Such are the general results which have been arrived at upon this important point of practice. For my own part, I cannot help believing that bony union, in such cases as we are now considering, is perfectly possible. I saw some time ago, and minutely inspected, a specimen of bony union of the neck of a femur, sent to me by Mr. Chorley, of Leeds, and which I have no doubt was a fracture within the capsular ligament. Complete union was established, and it is only just to mention, that Mr. Chorley so considered it at the time. I have seen another specimen of the same process, and cases of the kind are mentioned as having occurred in the practice of Dr. Bruedo and of Mr. Field. In short, there can be no doubt of the possibility of bony union in fractures of the neck within the capsule, although I am ready to admit that such cases are extremely rare.

Now, gentlemen, seeing how seldom in this class of fractures, union by ossific matter takes place, you may be inclined to ask, why not give up the hope of such complete union at once, and direct all your treatment to the facilitating of that sort of union which most commonly takes place in such accidents? The answer is, that since bony union is possible, and since close ligamentous union will answer the intended purpose, it is our duty to afford the patient the best chances of regaining the most useful state of the limb. Now, this we effect by striving to produce ossific union. But I really cannot but think, after all, that the want of bony union in all these cases, is to be attributed principally to the imperfection of the mechanical treatment which is applied to the limb. For, in the first place, as to the obstacle, of the want of apposition, I am sure I could shew you that the muscles by which this impediment is produced may be completely controlled. Then, as to the deficiency of vascular supply in the head of the bone, and of consequent organic power to generate ossific matter, I can only observe, that you have deposits—if not of bone—certainly of ivory patches, sufficient to satisfy you that there exists in the separated head a power to produce the substance necessary for a complete union. But on this part of the lecture I shall not say more until I have spoken to you of fractures external to the capsule."

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* London Med. and Surg. Journ. No. I.

On the latter Mr. G. says nothing new. The treatment recommended by Mr. G. for fractures internal and external to the capsule is the apparatus of Mr. Amesbury. Mr. Cooper may be said to be a degree or two higher on the scale of the unionists than Mr. Green. Perhaps he may be considered as evincing rather too much facility in the admission of facts, but the lecture is characterized by impartiality and judgment.

"In whatever manner," says Mr. Cooper, "we may reason upon this matter, facts must remain unaffected by our particular notions concerning the manner of their production. Many cases of bony union of transverse fractures of the neck of the femur within the capsular ligament are now upon record, and their reality is confirmed by dissection and the preservation of the parts. I know of about ten examples myself. You may read some of the particulars, of not less than four, in *Amesbury's Treatise on Fractures*. It is from one of these examples that the specimen, which I now produce, was taken by my friend Mr. Langstaff, who has been so kind as to lend me the preparation and accompanying drawings. If you examine them, you will see, that though the fracture has been completely within the capsular ligament, entirely through the neck, which has been absorbed, a firm bony union has taken place. In the line of fracture, in a kind of groove, which you may observe towards its centre, there was indeed a ligamentous substance, yet the bony connexion elsewhere is perfect and solid.

Another equally satisfactory proof of bony union is exemplified in the case of Dr. James, who fractured the neck of the thigh-bone by a fall from his horse in the South of France, and was attended by Dr. Brulatour, of Bordeaux. Dr. James having died of some pulmonary complaint seven months after the accident, the surgeon, whom I have mentioned, had an opportunity of dissecting the hip-joint, and of ascertaining the state of the fractured bone. Here are drawings of it, from which you will perceive that the case was a transverse fracture entirely within the capsule, that the neck is absorbed, and that the opposite ends of the fracture are even more completely consolidated by bony matter, than in the interesting case published by Mr. Langstaff, in the *Medical and Chirurgical Transactions*. I might quote other cases in proof of the occasional accomplishment of bony union; but these will perhaps suffice. We have no specimen of bony union of a transverse fracture of the neck of the femur entirely within the capsule in the museum of this University. All the cases are either not united at all, or united by ligamentous bands. But we possess the curious preparation already specified, in which the fragments of the head of the bone are consolidated, though the neck itself remains ununited. In the greater number of such cases, the accident leads to the absorption of the whole, or greater part of the neck, and whatever strength the joint regains, is owing to ligamentous bands, which generally extend from the inside of the capsule to each fragment, but sometimes from one fragment to the other. In many instances, the capsular ligament is also considerably thickened.

In the specimen which I now hold up, you see a fracture of the neck of the femur, within the capsule: the head of the bone is broken off at the commencement of the neck: these were the appearances seven weeks after the accident: you may remark, that there is no attempt at union.

In another example, which I shew you, the neck of the femur was broken, the head is much diminished and displaced, and nearly the whole of the cervix absorbed.

Here we have another preparation, in which the fractured neck of the bone is united by ligament.

In another specimen upon the table, you will see a fracture of the neck of the bone, where osseous union has taken place. On looking at its posterior surface, it is clear that the fracture extended within the capsular ligament; on looking at its fore-part, this is doubtful. The head of the bone is depressed, and the limb consequently shortened. These fractures, extending beyond the limit of the synovial membrane, as I have explained, commonly unite by bone. Here, however, is another preparation, in which the head of the femur is broken, and, though the fracture extends through the neck to the outside of the capsule, the uniting substance is ligamentous. But, as only three weeks had transpired from the time of the accident, when the patient, an aged female, died, it seems to me probable, that if she had lived longer, the union would have been of an osseous nature.

Gentlemen, I now request your attention to two facts of practical importance, brought before us by the foregoing views:

The first is, that we cannot always be positive about the fracture being entirely within the capsular ligament.

The second is, that the majority of cases, when they are of this kind, admit of union by ligament, and a few by bone; while all others reaching beyond the limit of the synovial membrane towards the trochanter, having more or less of a longitudinal direction, generally unite by bone, as well as common fractures."

Mr. Cooper considers it manifest that our duty, as surgeons, should always be to aim at bringing about union, by whatever substance it may be accomplished. He enjoins, whatever apparatus be employed, the quiet maintenance of the limb in a certain posture, without any attempt at pressure directly over the hip. Mr. C. does not appear to give a decided preference to any particular apparatus.

IV.

Hospital and Clinical Reports.

I. SINGULAR TUMOUR FROM THE UTERUS—MR. LAWRENCE AND DR. CONQUEST AT FAULT.

[St. Bartholomew's Hospital.]

OUR new contemporary, the London Medical and Surgical Journal, for as a weekly contemporary it is new, although, as a less frequent coadjutor, it is more antique, our new contemporary, then, has published a remarkable case which occurred to Mr. Lawrence and Dr. Conquest, and appears to have sorely puzzled these not inexperienced doctors. Ars longa, vita brevis, experientia fallax, said Hippocrates, and modern surgery must share in this instance a little of the opprobrium of ancient physic. But to the point. The case is headed "Caution to young Practitioners," and comes in the shape of a clinical confession, or homily, from Mr. Lawrence. We must give it entire, for it is brief and to the purpose.

"GENTLEMEN,

In the course of your practice you will often have occasion to exercise great caution and vigilance in ascertaining the nature of the complaints with which the patients who consult you represent themselves to be affected. You will have to guard against attempts at deception; and you will do well not to trust at all times to the explanations which you may hear. I am about to describe to you an instructive example, which particularly illustrates this precept. A young woman was recently received into this hospital, and her disease was said to be gonorrhœa. She was a patient in Faith's Ward. After a few days the discharge from the vagina was observed to be of a colour very different from that usually seen in the gonorrhœal fluid: it was dark-coloured, and almost intolerably fetid. A suspicion began to be entertained, that the disorder was of a more serious character than was at first supposed; an examination of the uterus therefore became necessary. Upon carrying the finger to the os uteri, I felt it somewhat hardened; and from it protruded a substance extremely soft and elastic, which bore no marks of polypus, or indeed of any other uterine excrescence with which I am acquainted. It was elongated—not very large, and appeared to be attached to the internal surface of the uterus by a very thin peduncle. I found no appearance of disease in the uterus, and I concluded that this growth could have been easily removed. In the meantime the chloride lotion was used, and the discharge was deprived of its foul odour at least. This young woman had been a companion to some gentleman, but her complaint, as she herself acknowledged, was a complete bar to that fruition which she was led to expect. I determined upon extirpating the tumour; but before doing so, I thought it prudent to request of Dr. Conquest, whose peculiar experience might have enabled him to form a better judgment than I could of the young woman's disease, to visit and examine her. He accordingly paid her a visit. He proceeded to an examination; but he could not declare the nature of the tumour—although he said that he was sure he could remove it without much trouble. He was urged, however, to do so; and after examining a second time, he pulled away the substance which proved to be nothing more or less, gentlemen, than a piece of——sponge! (A laugh.) It had been there for a considerable time—it was productive of great uneasiness—and it was deliberately placed in the position which it held, in order to answer certain purposes, which do not require to be more particularly specified. But this will be a lesson to you, exhorting you to be upon your guard, and to take care that you do not implicitly rely upon representations which you cannot yourselves confirm."

Appended to the foregoing are some clinical remarks, by Mr. L. on a case of gonorrhœal ophthalmia in a female. The case itself is not of much moment, nor the observations of much importance. Mr. Lawrence is made to remark, that he has never before seen acute gonorrhœal ophthalmia in a female. In his work on Gonorrhœal Ophthalmia and Syphilitic Iritis, he gives the particulars of a case of this description, communicated to him by Mr. Macilwain, and as there can be no good reason why males should suffer exclusively from the disease, and, further, as these cases alone prove that females do suffer occasionally, we conceive that the paucity of such instances in Mr. Lawrence's practice, must be in some measure the result of accident. Still, it cannot be denied that men are attacked in a much larger proportion than women. In our review, or rather analysis of the work of Mr. Lawrence, to which we have already alluded, we remarked the almost singular reluctance evinced by Mr. Lawrence to the employment of astringents or stimulants in the more acute affections of the eye. It appears from the clinical lecture before us, that this reluctance is a little diminished. It is hard to forego cherished opinions, and abandon practices consecrated by time and theory. Yet those who will not only think, but experiment for themselves, and those who will watch without prejudice the bold experiments of others, will probably venture farther than Mr. Lawrence has yet done. We had very lately an opportunity of witnessing a case of gonorrhœal ophthalmia, treated by Mr. Guthrie at the Ophthalmic Infirmary, which he has erected, with infinite credit to himself and advantage to the poor, in the neighbourhood of Charing Cross. The inflammation of the conjunctiva was treated by means of the ointment of the nitrate of silver, assisted by moderate local depletion. The eye was perfectly saved.

II. CHIMNEY SWEEPER'S CANCER.

Mr. Earle has made some observations on this disease, which are not undeserving of attention. The subject of the case was a patient named Bennett, æt. 28, who had an affection of the inguinal glands, apparently produced by soot, and analogous to chimney sweeper's cancer. There was a deep chasm in the groin, surrounded by ulcerated edges, which seemed disposed to throw out a fungous growth, and exhaled the ammoniacal odour, which Mr. E. considers as characteristic of the disease as an acid odour is of rheumatism, and a gangrenous one of phagedæna. On investigation, the patient admitted that, about 15 years previously, he had been employed in carting soot, and, at times, had warty excrescences on the scrotum and groin; at last the inguinal gland became affected. Mr. Earle has paid some attention to the subject, and presents the following as the results of his enquiries.

"The chimney sweeper's cancer has been classed amongst the number of malignant diseases, and is thought to be at first caused by a peculiarly stimulating property contained in soot. It was well known that a great deal of ammonia was contained in soot, but what it was that caused the disease in question, had not been as yet ascertained. However, it was well known to be peculiar to those countries where coals were used as fuel. This disease was described by Pott, who had published the only accurate account on the subject. He (Mr. Earle) having formerly attended a number of stations occupied by the sweeps, had been enabled to collect a mass of cases of this disease, the results of which were confirmed by subsequent experience. As that inquiry had led him to form some exceptions to the rules laid down by Pott, it was the more important to state them for the information of the pupils. The disease in question was invariably produced by soot, applied to the rugæ of the skin and scrotum; it commences with warty excrescences, which may remain stationary for years, and depending upon various circumstances. The patient in the present case was attacked gradually till six years ago. After some time the disease reaches the skin, throwing out a peculiar growth with a scirrhous hardness, and a peculiar odour very different from that which proceeds from those warts that are sometimes found on males and females from other causes. This growth increases by degrees, and ultimately involves the parts contiguous. According to Mr. Pott, the disease always commenced on the lower part of the scrotum; but this was not invariably the case, as the following remarkable instance would prove: A few years since, a gardener, shortly after strewing some soot over a garden, to destroy slugs, observed an extensive growth of warts make its appearance upon his wrists. Amputation was found requisite to insure the patient's recovery. This disease will sometimes attack the common integument of the cheek, and he himself had seen many instances of this kind in chimney sweepers. The disease, when it attacked the scrotum generally, advanced to the adjoining parts, spreading to the perineum and boundaries of the anus, not unfrequently affecting the testicle; ulceration and sloughing sometimes take place, and spread to the body of the testicle. It would appear from various observations, that its progress in glandular parts was different from that which takes place in the common integument. In the present case, a large chasm formed in the groin, and was making its way into the cavity of the abdomen, the edges throwing out that peculiar secretion which is so characteristic of this affection. The disease always spreads to the contiguous parts, clearly proving that it did not commonly proceed in the course of the absorbents. He (Mr. Earle) was acquainted with a case in which a bubo made its appearance: the bubo suppurated, and assumed a character similar to the primary affection. The individuals attacked by this disease were generally of a pallid hue, with wan and leaden countenances; their general health was greatly affected; but the circumstance which particularly deserved their attention was that peculiar secretion and ammoniacal smell which, if once recognized, could never be mistaken. Indeed, the odour in such cases formed as certain a diagnosis, as the smell in various other diseases, such as rheumatism, phagedena, &c. It would be of great use to recollect these distinguishing signs, as they lend much assistance to the surgeon. The infrequency of this disease would be explained, by its seldom attacking persons under thirty years of age; very few cases occurred between twenty and thirty. Children were not liable to this affection; and it was some consolation to humane individuals to be aware of the fact, as it was generally supposed that the children bound to this trade, were doomed to a life of suffering in every respect. The man now in the hospital, had never been apprenticed to the trade, and was not attacked with the disease for a considerable number of years. From a long course of observation, he (Mr. Earle) considered that there were strong grounds for supposing that a constitutional predisposition was required for the development of this disease, an idea which was materially corroborated by the fact of children not being liable to its ravages. Most of the cases which he had observed, were in persons between the ages of thirty and forty; and it was often twenty years before those individuals were affected, as was fully proved in the case of the patient now in the hospital. It was also a singular fact, that the disease shewed itself in particular families; as he had known two or three generations which had fallen victims to its effects, and all about the same period of life. Indeed, there could be no doubt that a certain state of constitution gave rise to the disease.

With respect to the mode of treatment, he had no hesitation in saying, that, as far as he knew, no topical or internal remedy could be of use; the scalpel was the only resource, and it might be relied upon with confidence, provided that care was taken to remove the entire of the diseased mass. When the glands in the groin were affected, he pursued the same practice; even when the testicle was attacked with disease, it would be right to give the patient a chance by removing the affected testis, provided the spermatic cord were sound. A case, illustrative of the success of this practice, occurred last July twelve months, in a patient who came to the hospital in a hopeless state. The inguinal glands were enlarged; there was a local affection occupying the whole of the scrotum; the testicles were involved in the disease, so that it was necessary to remove both; the entire scrotum was removed, with both testes, and it was even judged prudent to dissect away a considerable portion of the corpus spongiosum of the urethra. Notwithstanding this extensive excision, the patient is now alive, and perfectly well; and the disease in the groin is subdued. The man ran a great risk, as considerable inflammation of the integuments supervened; there were large sheets of sloughing of the integuments, and at one time he had a slight attack of trismus; the wound sloughed in the perinæum, and allowed an exit to the urine in that part, but it subsequently closed, and the man now makes water in the ordinary way. This case afforded a proof of the entire locality of the disease. In another instance, the disease was so completely local, that it was only necessary to remove part of the tunica albuginea. As the result of his experience, he should in all cases recommend the extirpation of the diseased part, and to some extent beyond its influence. But he would at the same time require the patient to abandon his business, as a return to it would be almost certain to bring on a return of the disease. From the rapidity with which this disease proceeded, when once established, no time should be lost, and the operation should be extensively performed. He was sorry to add, that the present case was beyond the power of the knife, for the ravages of the disease in the groin were of so malignant a description, and they spread so rapidly to the cavity of the abdomen, that he could only look forward to a fatal termination.

He had heard of various remedies employed for this disease, and particularly *iodine*, lately tried in a case at St. George's Hospital, but he understood it produced no good effect. In his opinion, time would only be lost by using such remedies, as the only certain plan was the immediate extirpation with the scalpel."

We may take the liberty of offering a comment or two on the foregoing valuable observations. There can be no question that the disease is not confined to the scrotum, as one of its names, "cancer scroti," would lead the inexperienced practitioner to believe. The cases mentioned by Mr. E. are decisive on this point; and we may add that we have twice seen it in the groin, unaccompanied with any scrotal implication. Mr. Earle pronounces that children are not liable to it. This is not the fact. A boy was lately a patient in St. George's Hospital, with every appearance of this complaint in his left groin. He was a chimney-sweeper, and the warty ulcerated growth had most of the characters of this form of cancer. There was also considerable enlargement of the deep iliac glands. The boy took iodine, under the direction of Mr. Brodie, the ulcerations healed, the warty growths disappeared, and the enlargement of the glands was diminished. Whether the boy continues well we do not know. We suppose this is the case to which Mr. Earle alludes, at the conclusion of his lecture; how erroneously, our readers may perceive! This is a slight sample of the looseness with which medical matters are too frequently disposed of. We must then conclude that "the fact of children not being liable to the disease," is probably not a fact, and, inferences drawn from it are possibly as fallacious as their foundation.

III. CASE OF STRANGULATED HERNIA—INTESTINE WOUNDED IN THE OPERATION.

H. Taylor, æt. 45, was admitted at 5, a. m. of the 22d January, with an inguinal hernia so tense as to preclude all hope of reduction by the taxis. "The *usual* means, *of course*, were employed for that purpose; *the warm-bath, venesection, ice, and tobacco glysters*." The operation, on the failure of these usual means, was proposed, but rejected, until half-past 12 o'clock, when pain having commenced about the lower part of the abdomen the patient consented to its performance.

"After the sac had been cut into, the convolution of small intestine which presented, might measure from five to seven inches. Its appearance was generally of a favourable nature, except that it was somewhat preternaturally reddened. In consequence of the employment of a very small and shallow director, which proved quite insufficient for the necessary degree of protection to the surrounding parts, the division of the stricture was attended by a wound of the intestine. A yellowish watery fluid flowed out, resembling the morbid secretion from the serous membrane of the abdomen, and might be easily accounted for by referring to the state of irritation produced by the hernia; but the secretion, as afterwards appeared, came from the mucous membrane of the intestines. A ligature was tied round the wound, and the intestine was returned to the abdomen. After its disappearance, the operator seemed surprized at finding *behind* the situation of the protruded intestine, a large mass of omentum, which was attached by very firm adhesions to the posterior surface of the sac. The ordinary state of entero-epiplocele is—the omentum anterior to the bowel; and Mr. Lawrence had no recollection of having met with such a case as this before. A considerable portion of the omentum was removed; and the vessels being very large, gave out a copious discharge of blood, and a considerable number were tied. The patient was then put to bed, and allowed to remain quiet for two or three hours, after which he took compound colocynth pill and sulphate of magnesia, at repeated intervals; but without effect. The pain in the abdomen increased in the course of the evening; leeches were applied in abundance, and purgatives repeated, but no motion, except the watery secretion already mentioned, followed. Next morning he complained of great weakness; the pulse was low, and the surface of the body rather cold. Cordials and stimulants were employed without effect, and the patient died about one o'clock in the afternoon of the 23d, just 24 hours after the operation."

Sectio Cadaveris. Peritoneum generally healthy, but reddened over the convolutions of the intestine on the side of the hernia. Omentum seen stretching downwards to the abdominal ring, where it was firmly secured by old adhesions; the intestines were compressed and indented by it in this course. The colon at the point of its attachment to the omentum was constricted, and so reduced in diameter as to oppose an impediment to the passage of the fæcal matter. The convolution of intestine, which had been protruded into the hernial sac was somewhat inflamed, presenting spots of vascularity and ecchymosis, and being agglutinated to another portion of intestine. The wounded part and every portion of the ligature was completely concealed from sight by a copious effusion of coagulable lymph; rendering it probable that, had life been preserved, the ligature would have ultimately been discharged into the cavity of the intestine. More disease was discovered in the brain than had been anticipated. The vessels of the dura mater were numerous and dilated; the arachnoid membrane thick and opaque and giving a milky appearance to the surface of the brain; whilst a copious serous effusion had also taken place into the pia mater. Upwards of three ounces of very pellucid fluid were found in the right lateral ventricle; the right corpus striatum had lost its colour, was brown and flaccid, as were the adjacent parts, which had been produced, no doubt, by a former effusion of blood into the part. The patient, we should mention, had had some paralytic affection of the left arm.

We must again take the opportunity of making a remark or two. The injury of the intestine in the operation scarcely deserves one, for those who see most of, and we may add those who have most practical acquaintance with, operations, will ever be found the most lenient to accidents of this description. It is your pert coxcomb who never fledged aught but lancet on human patient, perhaps not that, or your malignant knave, who loves to scarify reputations in the dark, it is these and these only who blazon failures as deeds of ignorance and imbecility. We trust, for the credit of human nature, and particularly of our own profession, that such practices and the taste for their encouragement are alike passing away. Let the press be as free as freedom herself, but the good cause is injured, the press itself is injured, when that liberty is abused, and lewd licentiousness unrestrained and unrestrainable prevails. Our readers know the liberality of our sentiments too well, to suspect that we could wish for aught but its perfect triumph.

We cannot forbear noticing the passage in the body of the case which we have placed in Italics. Does the reporter mean to assert that the means *of course* in the treatment of irreducible hernia, are "warm-bath, venesection, ice, *and* tobacco glysters." God help the patients of any surgeon or of all surgeons if they were so! They certainly are not means of course, they require discrimination in their selection, in their application, and so far from their being ordinary measures, we do maintain that in very few cases indeed can this string of powerful means be employed. In the hernia-patients whom we have seen, one was frequently, two generally sufficient, three could seldom be ventured on, the whole we might almost say never. In short, it would be neither more nor less than extremely bad practice to resort to all these measures, or even to the majority of them, previous to operation, in the greater number of cases.

We do not altogether participate in the astonishment evinced by the reporter at the state of the arachnoid, and corpus striatum. The condition of the former is very frequently witnessed where post mortem examinations are carefully and commonly performed, unaccompanied, as here, with any prominent symptoms during life. In a former number of this Journal we related some cases of this kind, and drew particular attention to the fact. The relics of an ancient extravasation in the corpus striatum, are also one of the most ordinary cerebral alterations discovered in pathological investigations. The reporter will probably grow older and wonder less. One word more and we have done. Mr. Ashwell, we are informed, is curing, nay, has six times cured "scirrhus uteri," by the hydriodate of potass: two or three grains of which, with six of extract of hyosciamus, are introduced into the rectum every night. Dr. Elliotson, on the contrary, proclaims that hydriodate of potass may be given in drachm doses, and is merely a diuretic. Now we are moderate persons. We should not, therefore, give drachm doses of the hydriodate, until we had felt our way with it, and if in less doses it did no good we should take care to ascertain that in greater it would do no harm. There are stories abroad respecting the effects of iodine on the testicles and mammæ, that should make people cautious. Again, we would scarcely be so uncourteous as to declare that we do not believe that Mr. Ashwell has cured six cases of "scirrhus uteri" by the hydriodate, and yet in point of fact we do—not believe it. We have seen that game played, and we have played it ourselves, but alas! after much trouble and some time there was the scirrhous uterus, never better, and often worse. No. We must have a new specific. This new journal is in truth consolatory. Dr. Seymour, it tells us, is employing iodine in diseases of the ovaries with manifest advantage. "The diminution of ovarian tumours is most remarkable." Be it so. But think Dr. Seymour, of your patient in the Queen's ward — think of Dr. Anthony Todd Thompson. This latter most able and truly estimable physician cured a case of ovarian disease by iodine at the University Dispensary. The poor woman unfortunately died of it at St. George's, and unless we are mistaken, a portion of her mortal remains is now preserved by the care of the curator and at the cost of the hospital. Enthusiasm is a very good thing in young journals, as in young people; but caution for us, who may now be said to be grey in our vocation!

V.

HISTORY OF THE CHRONIC PHLEGMASIÆ, OR INFLAMMATIONS. By M. BROUSSAIS; translated from the 4th French edition by Drs. HAYS and GRIFFITH, of Philadelphia. Longman and Co. London. 2 vols. 8vo. 1831.

THE work, here presented in an English dress, is unquestionably the best, as it was the first which came from the pen of that extraordinary man—BROUSSAIS. The other productions of this author have been handled severely by various critics—and we ourselves have taken the liberty to offer some commentaries both on the doctrines and practice of the distinguished founder of a large sect on both continents of the world; but the history of the chronic inflammations has always and every where been considered "a model of knowledge and originality in medicine." The work in question was originally published in 1808, and required eight years to arrive at a second edition; but since that period it has come to a fourth edition, and is to be found in the libraries of most physicians who study French writers. There is a large proportion of medical practitioners, however, both in this country and in America, who either do not, or cannot peruse the original work of Broussais, and to these we strongly recommend the present translation. We fully agree with the transatlantic editors in the following encomium.

"The History of Chronic Phlegmasiæ is unquestionably the *chef d'œuvre* of the most remarkable medical writer of the present day. For pure observation, just and discriminating views, and rigid adherence to the spirit of the inductive philosophy, few medical works can compare with it. No where else in medical literature is there to be found, a more copious array of facts carefully observed—morbid alterations met with after death connected with the antecedent symptoms—and the modifying effects of remedies minutely pointed out. Assailed as the other productions of this author have been with unprecedented virulence and acrimony of criticism, the present has extorted praise even from the most violent opponents of the physiological school."

The translators had a difficult task to perform, since the style of M. Broussais is remarkable, not only for force and boldness, but too often for harshness and abruptness. The translators, therefore, acted wisely in giving up the attempt at smooth and polished style, in this enterprize, preferring rather to render the descriptions and tenets of the author as accurately as possible. We think that Drs. Hays and Griffith have acquitted themselves very fairly in this translation, and the following passage will at once prove a sample of the work, and exhibit some useful hints to the medical practitioner.

"It is known to all physicians who walk hospitals, that there are met with in these establishments a number of pale, emaciated patients, who are daily losing their strength, and advancing slowly towards the tomb, with a more or less distinctly characterized hectic fever, and sometimes without any appreciable febrile action.

The reflections required for the composition of my work on hectic fever, had fixed my attention upon these unfortunate and too long neglected individuals; and as soon as I entered into the service of military hospitals, I resolved to devote myself to the particular study of chronic diseases.

When I sought for a guide among the most illustrious authors, and those to whom medicine confessedly owes its greatest advances, I found only confusion—every thing was conjectural. I immediately perceived that facts were wanting, although pathological anatomy had already been much enriched by Bonetus, Morgagni, Lieutaud, and by the investigations made after the example of the celebrated Bichat, by distinguished physicians of the school of Paris.

The deficiency was not in the number of post mortem examinations, but in the individual histories of cases, and in the connexion of the symptoms. At the present advanced state of the science, a good treatise on chronic diseases can no longer be a compilation, and still less a collection of observations, registered by different reporters, and collated by a person who has not seen the patients.

It was necessary for the presentation of this matter in a luminous manner, that a hospital physician should himself undertake the laborious task of collecting and digesting the histories of diseases. That these histories might be complete, it was indispensable for him to watch the progress of the disease to its termination, and that he should verify it positively, by assuring himself of the continuance of the health of the patient, or by making an autopsy of his body. This labour should not be confided to students, because the art of observing is difficult, and every reporter in framing his account, is influenced by his peculiar views and principles, and interprets nature differently.

It also appears to me, that the most happily organized physician requires the whole of his faculties to examine all the symptoms of a protracted disease; I even persuade myself that it is only by dint of repeating these examinations, that he can habituate himself to the language of suffering nature—that he can ensure the rigorous and uniform progress of the medicine of observation —that he can, by rectifying the doctrine, extend it, render it more correctly appreciated, and contribute to the progress of the science of man, by perfecting the art of curing his numerous infirmities."

As this translation can now be obtained from Longman's house, we strongly recommend it to the attention of our professional brethren.

VI.

Practical Observations on Cholera Asphyxia, &c. By James B. Kirk, M.D. 8vo. pp. 100. Greenock, May, 1832.

We must be very brief with pamphlets and indeed all works on cholera now. Yet it would be an injustice to the public, as well as to those zealous practitioners who have investigated the epidemic, to pass entirely unnoticed the results of their labour. Dr. Kirk appears to be a most philanthropic physician. From Greenock, he proceeded to Edinburgh, Tranent, Musselburgh, and Newcastle, studying the epidemic —and, at length, after multiplied observation, and extensive epistolary communication, coming to the conclusion that diarrhœa is *invariably* the first stage of the disease—and that, in such stage it is a very manageable complaint. That we are of the same opinion the readers of this Journal will testify. In not a single case, where we have been able to investigate the circumstances personally and carefully, have we failed to find that diarrhœa was the primary link in the chain of morbid phenomena. The great value of Dr. Kirk's pamphlet consists in the train of communications from upwards of twenty medical practitioners conversant with the epidemic, and who bear ample testimony to the truth of Dr. Kirk's position respecting diarrhœa. Among these we may note Dr. White, of Gateshead—Dr. Morson, of Newcastle—Messrs. Morson and Leighton, of the same place—Messrs. W., T. K., and J. Fife, do.—Mr. M'Intyre, do. — Mr. Tulloch, do. — Mr. Hardcastle, Mr. Frost, Mr. Clark, Mr. Greenhow, do. — together with many other experienced practitioners of the same place, and of Gateshead. From Mr. Lizars, of Edinburgh — from Mr. Meikle, of do.—from Dr. Carruthers—from Mr. Cunningham, of Tranent—Mr. Moir, of Musselburgh—Mr. Steele—Dr. Dunbar—Mr. Maccall—Mr. Sanderson — Dr. Mollison — Dr. Johnson, &c. &c. Our author has given proofs the most cogent that diarrhœa is the first stage of cholera—proofs that might stagger the most ardent sticklers for "perfect identity," between our epidemic and that which ravaged India. We shall take the following description of the first stage of the epidemic from our author.

"The patient complains of lassitude. He has frequently partial uneasiness in the region of the stomach; but this not to such a degree as to alarm him. He has frequent evacuations from the bowels—from two to a dozen times a day—not attended with much griping. His countenance is sharp and dark. He knows not of this symptom, and it is only recognizable to the eye of experience. Occasional nausea may oppress him. But this is not a very common symptom. These symptoms may continue, varying in severity, from one to ten days, before the second stage of the disorder supervenes. The evacuations at the first are generally of a dark brown or blackish hue. As the looseness continues they gradually become less and less of a natural appearance, until they assume the consistence and aspect of dirty water. Some headache, cramp of the fingers, toes, and abdomen, and almost always slight giddiness and ringing of the ears, accompany these symptoms. Sometimes an intervening two or three days of costiveness supervenes, which is followed again by the diarrhœa, and in a few hours collapse supervenes, and in general nausea and vomiting. The skilful practitioner will now give pills composed of aloes and calomel, or a pill composed of scammony, calomel, and aloes. The bowels then in general act briskly. Continue the course for three days—keep the patient warm in bed — give him mild and gentle nourishment; and, after an immense quantity of horribly offensive dejections, the patient is completely recovered, and snatched from the jaws of the dreadful fate which awaited him."

Dr. K. proposes a plan of exterminating cholera — namely, an examination daily in each town where it breaks out, of the inhabitants, in order to arrest the primary stage, by proper means. This, in truth, is the only sanatory cordon of any efficacy. In our reflections on the Board of Health in Musselburgh, and their contagious doctrines, we were rather severe. But let the reader peruse the following extract from Dr. Kirk, and say whether or not we had justice on our side.

"It was evident to me, from the eventful experience of these two days, that little was to be learned of the right treatment of this disease in Musselburgh and Tranent. The practitioners were in dismay, and knew not what hand to turn to. Their remedies were as various as they were uncertain; and I retired from the scene, where the Opprobrium Medicinæ stared me in the face, and taught me an impressive lesson of how poor a thing our boasted art is when God is against us. Illness persuaded me to go no farther: the love of my country and of my townsmen, who have so liberally supported me for half a life time, called on me to proceed to a place where the disease had long existed, where panic had subsided, and where I had heard that British energy, and British skill, and British science, had been brought to bear upon this terrible complaint. I proceeded next morning to Newcastle; and how rejoiced was I to find, after a single inspection of their hospitals, the disease managed upon a correct system, the medical attendants *calm and philosophical*, the indications of cure flowing out from premises easily to be understood; and all that was *obscure, mysterious, and empirical, in Tranent and Musselburgh*, was now dependant on rules of science easily comprehended."

Yet the practitioners of Musselburgh have designated all opponents to their pusillanimous and fanatic doctrines as ignorant and incorrigible sceptics!

Dr. K. is a non-contagionist—or, at most, a very moderate contingent contagionist. With the following extract we must close this short notice.

"Now, after all these facts, are we to pronounce the disease infectious? We have not an approach to a reason to say that it is so. The experience of India, Russia, England, and Scotland militate against it, for in all these countries the attendants of the sick have not been attacked in a larger proportion than the rest of society, unless that attendance had been in ill-ventilated places, where a malaria atmosphere was suddenly perfected; and thus are all the inhabitants of the little district exposed to disease in the same way that the people of an extended country have it, the atmosphere of which has, from inscrutable causes, become choleric. It is here that the contagionists have committed their grand error, in not distinguishing between an atmosphere imbued with disease, and the power of infecting directly by touch or close communication.

It will be seen by these observations that the doctrine I hold is that of contingent contagion; for, undoubtedly, facts most clearly evince, that there are circumstances in which the atmosphere of places becomes so contaminated that they directly cause the disease. But this exists in Cholera to a much less extent than in typhus fever and most of our contagious diseases,—so little, indeed, that we may look on this disease as one which may be considered non-contagious, except under the combined influences of many predisposing causes in the person attacked, and the effect of an atmosphere vitiated by the emanations of accumulated disease."

The appendix of communications from various practitioners, many of them distinguished ones, is highly deserving of perusal, and we recommend Dr. Kirk's modest pamphlet, in the strongest terms, to our professional brethren.

Spirit of the Foreign Periodicals, No. I.

VII.

Secret Remedies.

It appears that in France, as in our own country, swarms of quacks and impostors have sprung up since the alarm of the cholera morbus first began, and have been puffing forth their infallible cures for this direful scourge. Our only motive for alluding to this subject at present is, to draw the attention of our readers to the much better legislation towards medical men that exists in the Continental governments than at home. There, a commission is appointed to examine into the merits of all nostrums, pretended specifics, secret cures, &c. and the Academy of Medicine, if not satisfied of their propriety, have full power and authority to interdict all such nuisances. If such privileges were enjoyed and exercised by the profession in this country, there would speedily be an end to all St. John Longs, Eadys, even when countenanced and supported by "regulars," and to those infamous disclosures which so frequently occur in this city.—*Journal Univers. et Heb.*

VIII.

CURIOUS FŒTAL MONSTROSITY.

THE abdominal muscles were entirely awanting, so that all the viscera were exposed and floating loose. They had been contained in a very delicate membrane, which was ruptured during parturition.

The ribs on the right side were almost of their normal development; those on the left were merely rudimentary.

The left upper extremity was very imperfect, presenting only a trace of the arm and of two fingers.—*Journal Univ. et Hebdom.*

IX.

GONORRHŒA IN FEMALES.

RICORD, surgeon of the Lock Hospital at Paris, has communicated an interesting memoir, wherein he proves that, in all contagious and obstinate vaginal discharges, small ulcers, in every respect like true chancres, are to be observed on the mucous surface of the vagina and of the os tincæ. The speculum uteri must be used to examine the parts. His treatment consists in introducing plugs of lint, wet with astringent and mercurial washes, and in exhibiting internal antisyphilitic medicines.

No such appearances are to be seen in leucorrhœa, and other innocuous discharges.—*Journal Univ. et Hebdom.*

X.

POISONING BY ARSENIC.

WE request the attention of our readers to the following case for several reasons; viz. the importance and difficulty of the subject—the errors and ignorance so frequently manifested by medical men on toxicological subjects, and the possibility of crimes of assassination being overlooked and mistaken, during the prevalence of any epidemic disease. Such is possible at the present time, as the following short statement will prove.

M. and Mme Caillette having eaten some *bouilli* and other meats at dinner, were seized, two hours after, with sickness and vomiting, which, however, by degrees ceased, and did not again return till next morning. Purging now supervened, and the stools were inodorous, and unhealthy, On the following day, the vomiting was attended with much anxiety and great prostration of strength, and a sensation of tightness at the throat.

The day after the above patients were seized, a domestic, who had also eat of the bouilli, became dangerously ill, with extreme exhaustion—feeble, whispering voice—pulse scarcely to be felt—involuntary twitchings of the muscles—vomiting and painful purging. She died 36 hours after seizure. Also a beggar, who had applied to the first patients for charity, had received some of the bouilli, which he voraciously devoured. Soon afterwards, violent vomiting and purging, extreme thirst, and universal tremors came on, and were succeeded by a state of coma. He, however, slowly recovered; but not so M. and Mme Caillette, who lingered, the former for 13 days, and the latter for 4 weeks. Before death, both suffered much, from a sense of burning in the throat, dysphagia, fever, aphthous ulcerations on the mouth and tongue, and a remarkable insensibility of the hands and feet; in short, the symptoms of chronic gastro-enteritis. Dissection revealed nearly the same appearances in all three.—Marks of vivid inflammation in the stomach and duodenum, and a morbid development of the glandulæ Peyeri and Brunneri in the ileum.

There was discrepancy of opinion among the two medical attendants as to the cause of the deaths—one suspecting that poison had been swallowed, the other referring the symptoms to a *choleroid* disease. The ignorance of chemical manipulation prevented the former from satisfying himself.

Some of the ejected matters, and also the stomachs of the deceased, were sent to Orfila for examination; and the presence of arsenic was speedily detected by him in the vomitings of the domestic, but not in those of the master and mistress. This is not surprising, if we consider the lapse of time between the seizure and death. It is to be remarked that a packet of arsenic was afterwards found in the house of Caillette, and it is supposed that it had been used for salting meat.—*Journal Univ. et Heb.*

XI.

Electricity and Cholera Morbus.

M. Converchel read a memoir to the Academy of Medicine, wherein he endeavours to prove, that electricity diffused through the atmosphere is the "source of life," and that, therefore, it must act a very important part in the production of all diseases, but especially of cholera; which he attributes to the deficiency or withdrawal of the electrical fluid from the organs of the body. He recommends warm bath, frictions, and galvanism.—*Archives Gener.*

When will some of our mercurial Continental brethren be satisfied with patient attention to facts, and a sober deduction of theory from these, and from these alone? If electricity be really, as M. Converchel alleges, the "fons et origo vitæ," every chemist, with his machine, might become a Frankenstein!—Ed.

XII.

Application of Auscultation to Midwifery.

In the majority of females, whose pregnancy is advanced beyond four months and a half, and in all during labour, under certain favourable circumstances, the pulsations of the heart of the fœtus may be distinctly made out, at least by those who are at all conversant with the use of the stethoscope. We must not be discouraged if, upon our first trial, we fail to recognize the sound of the fœtal heart, and the murmur of the uterine circulation, especially in the early months of gestation; we must repeat our experiments with assiduity and zeal, and our labours will surely be rewarded with results both interesting and important. We must expect to meet with difficulties of various kinds; we have already adverted to the faint obscurity of the sounds in early pregnancy; besides this, an inexperienced auscultator is apt to be deceived by the transmission of murmurs which are not seated in the uterus or its contents. The following is an interesting specimen.

A young woman, whose catamenia had ceased for five months, the abdomen enlarged, the cervix uteri soft, spongy, and flattened, and who stated that she had distinctly felt some motion, as if of the child, was admitted into the "Hospice de la Maternité." The stethoscope, applied to the lower and left side of the abdomen, transmitted a distinct noise of double pulsations, the number of which in the minute was 128. This is a slow pulse for a fœtus of the 6th month, and the physician, therefore, made a memorandum of the case, as rather singular:—Fortunately he examined the pulse of the young woman at this time, and found it to correspond in frequency with the pulsations heard. The stethoscope was re-applied to different parts of the abdomen, and the double beats were every where discovered, and becoming more and more distinct the nearer to the epigastric region that the instrument was put, proving that they arose from the accelerated action of the heart of the mother. On careful examination, no other sounds could be recognized, and the woman was declared not pregnant. The result shewed the accuracy of the diagnosis.

The above case shews that the sound of the mother's heart may occasionally be heard over the abdomen, and may easily lead the auscultator into error.

The usual number of the pulsations of the fœtal heart is from 140 to 150 in the minute; and this appears to be nearly the same at the different stages of pregnancy. Authors have disagreed as to the accuracy of the last conclusion; but we feel quite satisfied from the very numerous investigations which we have made, that it is perfectly correct; indeed we have repeatedly observed that the pulse was quicker at the full time than during the 6th and 7th months. It is very remarkable that when the pulsations of the fœtal heart are very distinct, we may frequently recognise a bellows-sound, very similar to what is heard in some diseases of the heart and large vessels—probably it is owing to the meeting of the two columns of blood in the aorta and pulmonary artery.

During a protracted labour the pulsations of the fœtal heart have been observed to become weak and to intermit, and these phenomena have been deemed by some as indicative of the suffering and danger of the child; but this conclusion is not very tenable, and it would be highly dangerous to assume it as a guide of our conduct; for often during gestation we find the pulsations to be strong and vigorous at one minute, and perhaps the next they are feeble and faint; and besides, we are well aware that the circulation of the child while still attached to and connected with the placenta may be active and undisturbed, and yet no sooner is the child born, but it dies, in consequence of the lungs refusing to act. Now we conceive that the most frequent cause of this *palsy* of the respiratory organs is an injury done to the brain, and thereby to the whole nervous system, during a tedious and severe labour, from the compression of the umbilical cord, and the consequent congestion of blood in the head. A case will best illustrate this view. A woman was delivered by the forceps after a severe labour; the stethoscope indicated the life of the child immediately before it was born, and when the cord was divided, two distinct jets of blood were thrown out; the heart was felt to beat for a few minutes, but no attempt at breathing was made, and the child therefore died.

Dissection showed the cerebral vessels enormously distended with blood, and the substance of the brain, lungs and liver to be much congested. In similar cases effusions have frequently been detected in the ventricles.—*Arch. Gener., Janv.* 1832.

XIII.

UTILITY OF ACTUAL CAUTERY.

IN this country, we believe that the excellent effects of this remedy are overlooked; it is very much more alarming in anticipation, than in endurance:—some patients, Frenchmen we may guess, have even assured M. Jobert, that during the application of the hot iron they have experienced only a tickling and agreeable sensation!! [We recommend the Harley-street quack to visit Paris immediately, in search of such a delectable discovery.]

M. Jobert has employed the actual cautery, and also moxas in numerous cases of scrofulous swellings of the knee and other joints, with much, and very decided success. Many limbs condemned to amputation have been thus saved; and when the bones had not become carious, the motion of the articulation has been restored. Local palsies, and neuralgias, have been speedily cured; but our chief object in this notice is to direct the attention of our readers to the employment of the cautery in the treatment of that very intractable disease of the eye-lids, trichiasis. A man who had suffered from this complaint for ten years was speedily cured by one application of the cautery. The thin edge of a red-hot spatula was drawn along the eye-lid from one commissure to the other; the eschar formed was about 1½ lines in breadth; and was sufficiently deep to destroy the skin, cellular tissue, and palpebral aponeurosis, without affecting the tarsus and ciliary bulbs. Delpech, who first proposed the cautery in trichiasis, has treated many cases successfully by its use.

M. Jobert narrates a case of ulcer of the cervix uteri which he speedily cured by one application of the actual cautery.

It is proper to mention that our author distinguishes three different methods of employing the heated iron, either by applying it to the part with such a pressure as to destroy the texture deeply; or by drawing rapidly and very lightly the edge of the instrument over the part; and thus not disorganising all the thickness of the skin; or lastly by applying the point of a conical cautery, so as to make several small eschars. The pain felt after the application is best assuaged by cold water. —*Journ. Univ. et Hebdom.*

XIV.

Fracture of the Neck of the Femur.

[Extracts from Dupuytren's Clinical Lecture.]

The head of the femur has in some rare cases been driven through the bottom of the cotyloid cavity and fairly lodged within the pelvis;—and so firmly has it been impacted in this situation that even after death, it required much force to displace it. Falls upon the trochanter, and upon the soles of the feet have not unfrequently caused the head of the femur to be splintered, while the cervix was unhurt: but this accident is generally the result of contusions from shot; upwards of a dozen of such cases were seen by the Baron in July, 1830.

The most common situation of the fracture of the cervix is not at its middle, where it is weakest and most slender; but at its base, where it is united with the trochanter, which is not unfrequently broken at the same time, and is sometimes completely detached from the body of the bone. Dupuytren advocates the opinion that bony union may and does take place in intra-capsular fractures. Many specimens preserved in the museums of the Faculty of Medicine, and of the Hôpital de la Pitie, he assures us, distinctly prove this. The fracture is sometimes not complete, or the rough projections of the broken surfaces fit so closely to each other, like mortised work, that no displacement takes place for several days or even weeks. Sabatier reports a case, where twenty-two days elapsed, before the symptoms of fracture were apparent. The length of time necessary to the solid knitting of fractured cervix femoris is from 100 to 160 days, during the whole of which period, the extending apparatus must be constantly applied. Dupuytren has more than once seen cases where the provisional callus has given way when the patients were permitted to rise after two or three months; and thus shortening and deformity of the limb were occasioned. We must not always expect to find the foot turned outwards in this accident; the very reverse has frequently been noticed, and Bichat goes so far as to state that it occurs in the proportion of two cases in 10; a proportion however considerably greater than is warranted by Dupuytren's practice. The eversion of the foot is, in the opinion of the Baron, referrible to the action of the adductor muscles.

In the treatment of this accident, the patient ought to be laid on his back, the thigh bent on the pelvis, and the leg on the thigh; moderate extension may now be used with much advantage, as the muscles, which chiefly resist the adjustment of the two pieces are relaxed by the semiflexed position of the limb; the upper, or outer, or displaced portion is thus easily reduced, and brought in contact with the lower, or inner fragment; in which situation the object of the surgeon is to retain it. All apparatuses of continued and forcible extension are bad, and the following very simple contrivance, on the principle of permanent relaxation, is recommended as more simple and efficacious: —we must form a double-inclined plane with several pillars rolled firmly upon themselves into the form of bolsters, placed one above the other, and secured together by stitching; and along this double plane, we are to place another pillow lengthwise, extending from the hip to the heel—the leg and thigh are retained in their places by sheets folded round the limb after the manner of a cravat, and secured by their ends to the posts of the bed. During the first month, the surgeon ought to raise the thigh a little almost every day, and gently to draw the limb downwards. When he has reason to believe that the consolidation is effected, the double plane should be gradually lowered, by removing the pillows, one by one.

By this simple contrivance Dupuytren has succeeded in obtaining numerous cures with little or no shortening of the limb.—*Journ. Univ. et Hebdom.*

XV.

OBSTINATE CHRONIC OPHTHALMY WITH ULCERATION AND OPACITY OF THE CORNEA.

M. LE PELLETIER strongly recommends the use of the argenti nitras as a caustic, and calomel to be blown upon the eye every second or third day. One example will suffice to shew his practice.

A man aged 30 years had for many years suffered from repeated attacks of chronic ophthalmy, which had left puffy swellings of the eyelids, opacities of the cornea. The vision of the right eye was lost; and that of the left one nearly so, as the inferior half of the cornea was quite opaque, and the upper half nebulous and dim; there were also two large ulcers on it. Constant pain, weeping, and intolerance of light distressed the patient.

Calomel was ordered to be blown into the eye every second day, without any previous treatment; a calomel collyrium was also ordered. In five days the extreme sensibility had ceased entirely; the eyes could bear the light; the redness and swelling of the conjunctivæ were gone; and the opacities of the cornea considerably diminished. In a fortnight more he was so much improved, as to be able to leave the hospital.—*Ibid.*

XVI.

A SAGACIOUS AND IMPORTANT REFLECTION.

WHEN we assemble a number of facts and endeavour to draw legitimate inferences from them, we must *weigh*, not *count* them. "Non numerandæ solum, sed etiam perpendendæ sunt observationes."

XVII.

LETTER ON CHOLERA. BY BARON DUPUYTREN.

February, 1832.

THE history of this fatal malady is deficient chiefly in very exact information of the true seat of the evil, and of the nature of the organic lesions produced in the intimate texture of our bodies. Some authors have supposed that the brain is the original seat of the disease; others have referred it to the spinal marrow; or to the semilunar ganglia and sola plexus; or to the heart. It appears to me that these opinions are little probable; but it would be well to verify them by very careful dissection, and by a minute examination of any changes found in these viscera.

The seat and character of the pains, and the nature and profusion of the discharges, lead the mind to suppose that the stomach and bowels must be the organs which primarily and principally suffer. Hitherto, however, it must be confessed, no very constant, or uniform morbid appearances have been detected: but to account for this, it is well to keep in mind that most of the dissections have been only of such patients as have very rapidly been carried off: to obtain satisfactory information, we must direct our examinations especially to the bodies of those who have resisted the disease for some time, and in which, therefore, it is reasonable to suppose that more distinct and obvious effects have been produced. Moreover it appears to me that the dissections have seldom been performed with a sufficiently inquisitive minuteness and accuracy.

As one of the most striking symptoms of cholera, is the immense quantity of a thin, watery, and almost insipid fluid discharged by vomiting and purging, is it not reasonable to direct our researches in an especial manner to those viscera which furnish this fluid? Now these viscera must be either the pancreas, the liver, or the alimentary canal; and if this last, then it must be that part of the tissue which supplies its peculiar secretions, viz. the small follicles (or glands of Peyer and Brunner) which are situated in the substance of the mucous membrane, and which are found clustered in certain parts of the bowels, known to all anatomists. The quality of the evacuations assures us that it cannot be the liver, and we are therefore led to believe that the offending organ must be either the pancreas or the secretory apparatus of the intestines. I am persuaded that a very attentive inspection of these follicles by the microscope will reveal in their cavity, walls, or surrounding substance, in their development, in the morbid changes of their texture and of their secretions, the seat and perhaps even the nature of cholera.

This is not mere conjecture: I have frequently examined the bodies of persons who have died of sporadic cholera, and I have uniformly found the glands of Peyer and Brunner exceedingly enlarged, and yet without any very distinct traces of inflammation. I do not believe that the epidemic differs so materially from the occasional cholera as to be attended with any marked difference in the seat and nature of the disease.

I would say therefore that the cholera has its seat in the alimentary canal in general; and more particularly in the follicles of the stomach and small intestines; that it essentially consists in a "*secretory irritation*" of these organs; that this gives rise to the dreadful pains of the bowels, and to the profuse watery evacuations; that the symptoms of disturbance in the functions of the brain, spinal marrow, particular nerves and the muscles to which they are distributed; of the heart and lungs, &c. are to be considered only as the sympathetic effects of the original disease; effects quite analogous to what we witness in malignant dysenteries which are attended with severe pains and excessive purging.

If these ideas be confirmed by dissection, it would follow, that the preventive treatment of cholera should consist, in guarding the surface of the body most strictly from the impression of cold and of moisture, by the use of flannel worn next to the skin; and in avoiding whatever tends to excite, or irritate the stomach and bowels, such as acrid, heating food and drink. The curative measures, when the disease once manifests itself, which are likely to be most useful, are leeches applied to the pained parts of the belly; composing drinks, (such as a decoction of poppy heads sweetened with syrup of gum, and administered frequently) and the exhibition of plumbi acetas, either in the form of pills, or dissolved in the decoction. I may remark that the preparations of opium are not so efficacious as the decoction of the poppy heads. The former have, in my practice, repeatedly failed, where the latter succeeded to my wish; and the acetate of lead, a sedative "par excellence" in all cases of inflammation attended with copious discharges, has been productive of better effects in sporadic cholera, when exhibited in a state of solution, than formed into pills.

Besides these means, the patient ought to be enveloped in warm blankets; frictions most perseveringly employed, and every now and then the steam of water introduced under the bed-clothes, so as to form a hot atmosphere round the body. We must carefully avoid, at least in the commencement, all purgatives, emetics, and irritants, which have been so freely and perniciously ordered by many, for they cannot fail to aggravate the irritation which is the essential character of the malady, and thus to hasten its fatal termination.

P. S. The dose of the acetate of lead may vary from 10 to 25 grains in the course of a day; it will be best given by ordering 3, 4, or 5 grains in a cup of the decoction, every hour or so, until the patient experiences some relief of suffering, and the evacuations are diminished. This mode of treatment has succeeded admirably in several cases of most severe sporadic cholera, which have occurred in my practice.

Appended to the preceding letter, are some critical remarks by the Editor of the Revue Medicale. He finds much fault with the Baron for presuming to say that the dissections have not hitherto been conducted with sufficient minuteness and skill, and reminds him of the swarm of young medical men who have left the anatomical schools of France to visit those countries in which the epidemic was raging.

He tells him that he is mistaken in asserting that profuse evacuations are an essential symptom of the cholera; death may take place, even where there has been trifling vomiting and purging. Again, his opinion as to the identity of the nature and seat of ordinary and of epidemic cholera, cannot be strictly correct, even upon his own premises; for surely the Professor will not deny that the liver, which may be put "hors de question" in the consideration of the latter, is intimately and immediately involved in the former, as is proved by the bilious dejection?

It appears very strange that the Professor has omitted any allusion to the exhalant vessels of the intestines, and directed his suspicions solely to the mucous follicles on their surface. Are not they much more capable of producing the liquid stools than the small glands, which are irregularly scattered, and in some places appear almost altogether deficient.

The circumstance of M. Dupuytren having found the glandulæ Peyeri et Brunneri enlarged in several cases of sporadic cholera, cannot be considered as of much avail; for so common is this morbid appearance, in some continued fevers, that a distinguished physician has proposed to designate these by the name of "dothinenterites," from the Greek words "*δοθιην*," furunculus, and "*εντερά*," intestina.

For these reasons, we think that the distinguished author has been led into error, by assuming the *effects* of the disease for the *causes*; as well might we say that the enlargement of the spleen was the cause of intermittent fevers, because such a morbid state is almost invariably found in patients who *have died of these.—Revue Médicale.*

XVIII.

DISEASE OF PYLORUS, CURED BY NARCOTICS.

A MAN, ætatis 57, addicted to excesses in wine and women, had been reduced from a state of comfort to much bodily and mental distress. His earliest symptom was the feeling of a dull oppression in the region of the cardia; to this succeeded a pungent pain, always aggravated by wine or other stimulants. Dyspepsia, pyrosis, and increased flow of a sharp acid saliva, which set his teeth on edge, reduced his strength and flesh amazingly, and so imperfect was the digestion of his food, that it was generally passed in part unchanged; the abdomen was swollen, hard, and elastic, and the bowels were obstinately constipated. He had been in this condition for a year and a half, when he consulted M. Virey in March, 1831:—his appearance then was deplorable—his sufferings, especially at night, very severe, for no sooner did he lie down in bed, than his food was immediately vomited, accompanied with sour belchings, hiccough, and great anxiety; his stomach now could not digest the lightest farinaceous food. Various physicians had been consulted, and various modes of treatment tried, but all to no avail; leeches, blisters, tonics, stomachics, had only aggravated his distress. Every thing indicated the approach, or the actual presence, of organic disease of the pylorus, and the suspicion was strengthened by the lancinating pains felt when the ensiform cartilage was pressed. M. Virey had a most unfavourable opinion of the case.

Treatment. Warm clothing, with an occasional warm bath to soften the skin, which was harsh and dry; his diet to consist of milk, rice with sugar, white, gelatinous meats, and the lightest kinds of fish without any spices. No food to be taken in the evening, in order that the stomach might not be loaded during sleep. By attention to these rules he improved a little; but still, every now and then, his sufferings returned in all their intensity, from the slightest mental or physical cause. To lull this excessive susceptibility, resort was had to the syrupus papaveris, in doses at first of ʒij. and gradually increased to ℥j. and with much success, for the sickness, belchings, and vomiting ceased, and calm sleep was procured; the medicine, however, lost its efficacy in a few weeks. Opium, in the form of pills, was administered, and a Burgundy-pitch plaster, sprinkled with crude opium, applied to the epigastrium. The patient was better for the next two months; a diarrhœa supervened, which, on the whole, appeared to relieve the symptoms, as the digestion was less painful and imperfect during its continuance. By a steady perseverance in the mild and regulated diet, and in the use of the opium, a complete cure was effected in nine months, and he was restored to strength, cheerfulness, and plumpness. It was uniformly observed, that all tonics and stimulants on the one hand, and, on the other, whatever was enfeebling, invariably aggravated the symptoms and threatened a relapse. —*Revue Medicale.*

XIX.

TREATMENT OF SCROFULA BY IODINE.

M. BAUDELOCQUE, physician "de l'Hôpital des Enfans," communicates an interesting memoir on the results of his practice in strumous disease. Sixty-seven girls, from the age of four to fifteen years, were treated by iodine in its different preparations. In all, the disease had existed for a considerable time, varying from nine years to ten months. Fifteen of these children were completely cured; fourteen so much improved, as to indicate a speedy cure; thirteen experienced less benefit than the preceding, but still sufficient to warrant hopes, though distant, of their recovery; five exhibited little, and twenty no amendment at all. All these patients with scarcely an exception, were much worse when they commenced the use of the iodine, than at the period of their admission into the hospital. Far from having derived any advantage from their residence there for several months, or even years, their condition was manifestly less favorable. This remark is well worthy our study, as it disproves the assertion of those medical men, who state that scrofula has a definite duration in the system, and that, after a certain lapse of time, it is easily cured, whatever remedies are employed. M. Baudelocque is satisfied, that the length of time during which the disease has existed in any case, had no influence in assisting or in quickening the cure of the numerous patients under his care.

Of the 67 cases, 17 had enlargement of the glands of the neck, jaw, and armpits; they took iodine inwardly, and employed likewise ioduretted baths, and friction with ointments of the potassæ hydriodas, plumbi ioduretum, et hydrargyri proto-ioduretum.

The mode in which the discussion of these enlargements is effected, makes us well acquainted with the nature of their formation; they consist of an aggregation of numerous small tumours, united together by cellular texture, which, in course of time, becomes firm, and increased in extent. In proportion as this cellular substance is dispersed, and returns to its normal state, the small glands, which are less quickly absorbed, become moveable and disjoined, and these, again, are resolved into several still smaller, until they quite disappear. To prevent the deformity of the scars so frequently left after a scrofulous abscess, the loose skin must be destroyed, either by the knife or by caustic, during the cicatrization of the sore, and a new healthy skin will be formed, so as to cause little disfigurement.—*Revue Médicale.*

XX.

NATURAL HISTORY OF MAN.

M. **GEOFFROY SAINT HILAIRE** concludes an interesting memoir by stating that females are generally much shorter than the males, in those races of mankind whose stature is great; the difference being much less among people of low stature;—that the races which are most remarkable for tallness, for the most part inhabit the southern hemisphere, while the most diminutive are found in the northern one;—that among the very tall races some live in South America, others in the South Pacific Archipelago, between the 10th and 50th degree of South latitude;—that some very diminutive races live in the southern hemisphere; and that some tall races are found in the northern hemisphere; and if we compare the geographical position of these various divisions of mankind, we arrive at the curious result, that the diminutive races are almost always found near the very tall, and the very tall races near to those of low stature; that the variation in the size of different races may be explained in part by the influence of climate, diet, and mode of life—that it is extremely probable that the stature of the human race has not sensibly diminished, since the earliest age of history, or even from long anterior to that epoch.—*Revue Médicale.*

XXI.

ABSCESS OF THE HEART.

THE patient, a young soldier, died on the 55th day of confluent small-pox. A month before his death, an unhealthy abscess appeared on his left elbow; the fore-arm and hand of the same side were much swelled, and were cold to the touch; he lay on his right side, almost motionless from extreme weakness, moaning, but he did not complain of any local pain. Dissection shewed a heart somewhat larger than usual; the left side alone was hypertrophied. At the base of the left ventricle, posterior to the mitral valve, and imbedded in its fleshy substance, was found an abscess of the size of a hazel-nut, containing a white, homogeneous and fluid matter—it did not communicate either outwardly or inwardly, and was completely enclosed in a cyst.—*Revue Médicale.*

XXII.

MEDICAL JURISPRUDENCE.—ON THE DECOMPOSITION OF THE ANIMAL STRUCTURE.

M. **OLIVIER** and M. Denis were desired to examine the body of a female, who had been interred three months before, as suspicions had been excited that she had been murdered by her husband, and had died from the effects of blows upon her head, and fracture of the skull. The husband alleged that he had obtained the authority for interment from the physician appointed to ascertain the cause of his wife's decease; but it appeared that the physician had never examined the corpse, but had trusted to the husband's declaration that she had died from a rupture of a blood-vessel. The deceased was 55 years of age, and had been affected with hemiplegia for nine years. The body was buried the day after her death, in a dry chalky soil.

When exhumed, it did not present the appearance of much decay; the external surface, and the pectoral and abdominal viscera were little altered; but on examining the head, the right hemisphere was found softer and more decomposed than the left one, the anterior lobe was converted into a fatty matter, semi-consistent, and quite similar to what covered all the surface of the brain and spinal marrow, in the place of the pia mater, which had altogether disappeared. A similar greasy substance was discovered in both pleuræ, posterior to the lungs, which were quite shrivelled and dry. M. M. Olivier and Denis were led to the conclusion, that adipocire was formed at those parts where blood, or a bloody fluid had been deposited, and that therefore this female had died of a cerebral hæmorrhage. Such was their opinion, founded partly on the greater softness of the right hemisphere, and partly on the fatty degeneration of the anterior lobe, which indicated that it had been the seat of the hæmorrhage; else how was the fatty deposit not found in other portions of the cerebral substance? The occurrence of a similar matter in the two pleuræ is easily accounted for on the same view of the subject; for we know that in rapidly fatal apoplexies, there is generally an excessive congestion of blood in one or in both lungs; and it is but probable to suppose that after death there may be a gradual sudation of the same into the cavities of the pleuræ.

The husband was acquitted on the strength of the medical evidence.—*Revue Médical.*

XXIII.

Letter on Cholera, by Dr. Ochel of Petersburg.

By far the greater number of medical men in St. Petersburg are of opinion that this epidemic is *not contagious*, but that it is propagated by aerial miasmata and exhalations from the earth. The sudden appearance of the pestilence, and the rapidity with which it diffuses itself whenever it appears, strongly corroborate this idea. Moreover, many who escape the disease in its violent and concentrated form, suffer from *choleric* or *choleroid* attack, which are to be viewed only as diminutives of the great original; thereby distinctly proving that its severity and fatality are in proportion as the patients are predisposed to be affected by the influence of the atmosphere.

Dr. Ochel contends that the proximate cause of the disease is a paralysis of the organ of circulation. His remarks apply chiefly to the third stage, or what has been called the "stadium reactionis," which varies exceedingly in its character in different individuals. In many it commenced with delirium, which was speedily followed by coma, and numerous patients died in this state; in others there were neither delirium, nor coma, but inflammatory attacks of different viscera, sometimes of the liver, and not unfrequently of the parotid gland; in a third class he observed, fevers of various types, gastric, bilious, inflammatory, typhoid, or even intermittent. The treatment which he found by far the most effectual, consisted in giving repeated doses of common sea-salt in tepid water, till it produced bilious vomitings and stools. Out of a great number of cases, he selected 15 of the most aggravated; in each of these he gave the solution of salt, and in every case bile was copiously evacuated in less than an hour: 13 were saved and two died. When the bile passed downwards, either at the time, or on the morrow, he observed that the patients were generally cured in three or four days; when it did not, they were subject to relapse of particular symptoms, as watery vomitings, cold extremities, &c. &c.; but these threatenings vanished as soon as the bile was evacuated by a few spoonsful of tincture of rhubarb. Some of the medical men tried emetic doses of ipecacuan and tartrate of antimony, and found that nearly the same success was obtained, provided a sufficient quantity of bile was evacuated. Even the lower orders in Russia, who refused to apply for medical assistance, resorted to large quantities of oil and tepid milk to excite vomiting, and frequently with good effects.

From these facts, Dr. Ochel infers that the correct mode of treating cholera is to evacuate the bile as quickly as possible; and that whatever tends to check the vomiting and purging, before this effect is produced, is decidedly pernicious; for though death may be thus prevented at the onset of the disease, the foundation is almost always laid for the secondary disease, or "stadium reactionis," which never takes place when the bile has been freely discharged in the first stage. Dissection of rapidly fatal cases adds confirmation to this view of the subject; the gall-bladder is found distended with bile, and the ducts closely contracted. We must carefully distinguish the morbid appearances in such as have died in the early stage, from those which we observe after the secondary disease, under any of its different modifications, has commenced.

Many of Dr. Ochel's colleagues observed that the best preservative against an attack of the epidemic was a powerful emetic. As the disease began to subside in Russia it was noticed that numerous cases of bilious vomitings and purgings occurred.

Many who had been cured of cholera by the sedative and astringent treatment, recovered exceedingly slowly, and for several weeks after they had been pronounced well, suffered from vertigo, spasms, &c. &c.; but these symptoms quickly disappeared, when the discharge of bile was promoted.—*Revue Médicale.*

XXIV.

RHINOPLASTIC OPERATION.

THE patient had been long affected with an enormous cancer of the nose, which had resisted every treatment. M. Blandin, having completely excised the diseased part, detached from the forehead a flap of integument, and shaped it to the stump of the nose; but he did not divide the pedicle of the flap as has been usually done; instead of doing this, he separated the skin from it, and then cut away the integuments from the root of the nose; the opposite raw surfaces were brought together, and quickly united. By this manœuvre, the new nose continued to retain its communication with the blood-vessels and nerves, which imparted life to it at first, and was thereby much stronger and less likely to be affected by cold, and other accidents.—*Journal Hebdomad.*

XXV.

CURIOUS CASE, IN WHICH THE REAL SEX OF A CHILD WAS NOT DISCOVERED TILL HE WAS 18 YEARS OLD.

E. D——c. was born on the 13th Aug. 1812, and appeared to be a female, was registered as such, and educated as a girl till 1831. In June of this year she consulted M. Gendrin on account of ophthalmia in both eyes. He was struck with the beard on her face, the bass tone of her voice, and the development of the pomum Adami. The catamenia had not appeared. Subsequently she mentioned that there was an irregularity in the genital organs, and that the irregularity had been increasing ever since the age of puberty, which with her commenced about six years before, as indicated by the change of voice, and the black, stiff hair which appeared in different parts of the body. The mother stated that her child when young had the activity, and had always preferred the sports of boys, to the quieter amusements of girls.

She has not yet shewn any attachment for either sex. On examining the genital organs, a longitudinal fissure, like a valve, extended from the inferior edge of the symphisis pubis to near the anus. Rather higher up than the usual situation of the clitoris, was observed a loose cylindrical organ, 15 lines long and about five or six thick, covered by a very fine and extensible membrane, and ending in a regularly formed glans, having a corona round its base. The vena dorsalis penis was seen on its upper surface. A prepuce covered one half of its surface; the skin, of which this prepuce was formed, was continuous with the margins of the vulva-like fissure in the perineum. Along the under surface of this organ was a deep channel, or groove, which terminated posteriorly in the vulva, and at this point of junction were observed 5 open, irregularly arranged orifices, not unlike those of the vasa efferentia round the verumontanum. A smooth mucous membrane covered the surface of this gutter, which was in lieu of a urethra, and it presented faint traces of the longitudinal furrows observed in the natural passage. With much difficulty the finger could be introduced, to the depth of three inches, into the vulva, but no opening was detected in it. A straight instrument might be passed in the direction, from the symphysis pubis to the middle of the sacrum, for three inches and a half; and when the finger was carried up the rectum, the instrument might be felt, and it was ascertained that there was not more than two or three lines thickness of substance interposed. Two elastic roundish bodies were felt by the finger round the supposed neck of the bladder; these were probably the lobes of the prostate. No meatus urinarius could be perceived; but, as the water was discharged downwards, the orifice must have been situated in the perineal canal. At first, this canal was considered to be merely a dilated urethra, but the circumstance of the straight instrument being stopped at the depth of three inches and a half, and not appearing to be embraced by a tight canal, contradicted this idea. By perseverance, however, a curved instrument, directed upwards, was passed into the bladder, and the finger in the rectum did not discover any intervening substance, but the mere walls of the gut and bladder—a thickness of four lines at the most. There was no trace of scrotum, testicle, or of spermatic cord. The mammæ were not at all developed. The young person declared that the cylindrical organ, or imperfect penis, was sometimes enlarged and erected, and the erections had occasionally been followed by a discharge of a whitish, thick, viscid fluid. The rami of the pubes and the tubera ischii were more approximated than usual; the hips projecting; the buttocks flattened, and the thighs not rounded, and verging inwards as in females. The mons veneris, the linea alba, the chest, chin and cheeks, and the extremities were covered with hair, and the general configuration of the body was decidedly masculine.

The medical men, after a most careful examination, concluded that the sex of the person had been mistaken, and the civil tribunal, therefore, ordered that the registry should be altered, and the surname changed to that of a male. —*Revue Médicale.*

XXVI.

DELIRIUM TREMENS, SIMULATING DRUNKENNESS.

A MAN, 25 years of age, of very dissipated habits, who had been long affected with syphilitic symptoms, was suddenly seized with a strange inability to walk with steadiness. When he tries to advance, he reels sometimes to the right side, sometimes to the left, and cannot, by any effort, prevent it—the street, he says, is not wide enough for him. His pulse intermits at every seventh beat; all the other functions healthy. Opium, in substance, was administered, the dose being gradually increased from one to twelve grains a-day, in the course of three weeks. He was completely cured.—*Archives Génerales.*

XXVII.

PROBABLE CAUSE OF EXTRA-UTERINE PREGNANCY.

MADAME E. on the 26th Feb. 1817, was suddenly much terrified, *while receiving the embraces of her husband,* by the fall of a stone which had been thrown against the window of her bed-room. She had no family hitherto, though she had been married for 12 years. The catamenia had regularly appeared till after this date, when the other symptoms of pregnancy presented themselves. On the 13th April, she had a violent attack of bearing down, and of excruciating pain in the left side of the hypogastrium, which very closely simulated the threatening of an abortion. The symptoms gradually passed by, but again returned in two months. On the 6th Dec. all the signs of child-birth came on; but the physician could not, by examining, reach the os uteri with his finger. After a few hours of suffering, all pains left her, and from this moment the motions of the child, which had hitherto been very obvious, altogether ceased. For three months after this date, she had repeated attacks of inflammation in the abdomen, and was reduced to a state of marasmus, when, very unexpectedly, the catamenia reappeared and health was quickly reestablished. The belly, however, remained very large. After two years of widowhood she again married, and enjoyed good health till April, 1824, when she died from an attack of peritonitis, followed by diarrhœa. On opening the abdomen, the fœtor was insupportable, and M. Beclard, therefore, contented himself by removing the tumor along with the uterus, to which it adhered. The fœtus was of the female sex and of the full size; it was enclosed in a bag, situated to the left of the womb, and was in a great measure converted into a fatty matter, like adipocire.—*Archives Générales*.

XXVIII.

TORSION OF THE ARTERIES AFTER SURGICAL OPERATIONS.

Case 1. A young man's leg was amputated by the circular incision. The anterior and posterior tibial, and the peroneal arteries, were twisted in the simple manner recommended by M. Amussat, without any previous laceration of the internal and middle tunics. The time occupied was much shorter than required for applying three ligatures; one of the tibial veins, which was bleeding profusely, was likewise twisted. There was an oozing, more serous than bloody, from the wound for several days. The wound did not heal favorably, as the patient's health was not good; in six weeks, however, the stump was quite cicatrized.

Case 2. A woman, aged 48, had her thigh amputated; the femoral artery, well detached from the accompanying nerve, was twisted—only one other vessel required torsion. On the fourth day the bandages were removed; they were dry and very little stained: the wound was quite healed in four weeks. This patient having subsequently died of phthisis, an opportunity was afforded of examining the vessels; the femoral artery was closed exteriorly by condensed cellular membrane, and plugged inwardly by a fibrinous white clot. Its walls and calibre were quite normal.

Case 3. A man, aged 52, was admitted into the hospital with an enormous diffused, aneurismatic swelling of the lower third of the thigh: amputation was performed at the upper third. The femoral artery was attempted to be twisted, but it gave way at the third turn of the hand, leaving a gaping orifice; a ligature was, therefore, applied—the muscular branches were, however, secured by torsion. For several days after the operation, there was an inconsiderable serous oozing from the wound, which, however, was completely cicatrized in about six weeks.

Case 4. A man, aged 64, had cancer of the penis, which required removal by the knife; five arteries were twisted. It was found much more difficult to detach these vessels from their connexions than in the previous operations. The wound healed within a month.

In addition to the above cases, several others are alluded to of amputations, in which complete union of the wound took place in 6, 8, 12, 15, and 18 days. —*Journ. Hebdom.*

XXIX.

LETTER ON CHOLERA, BY PROFESSOR DELPECH.

AN attentive examination of the bodies of those who have died of cholera, clearly demonstrates that its essential or proximate cause is an active and disorganising inflammation of the solar plexus, semilunar ganglia, and renal plexuses, which constitute the great central point of the ganglionic system; and this inflammation is sometimes propagated to the pneumo-gastric nerves, to the pneumo-cardiac plexus, and even to the medulla oblongata. Numerous other pathological appearances have been remarked; but none of these is uniform; and many are evidently the result of pernicious treatment. The chain of symptoms most beautifully corroborates this hypothesis; for all the organs which are most involved, are under the influence and control of the ganglionic nerves; namely, the liver, the circulating and respiratory apparatuses, the abdominal viscera, including the kidneys and bladder. A curious fact is, that the vomitings and purgings consist of the serum of the blood, which being thus deprived of its watery portion, becomes thicker and thicker:—now this change cannot be conceived to take place without an important lesion of the tri-splanchnic nerve. The nature of this lesion we have explained to be an inflammation, and we should therefore infer that an antiphlogistic treatment must be most successful; practice has confirmed the truth of the conjecture: bleeding is the sheet-anchor of safety, when the severe symptoms have set in; the earlier stages may be combated with opium, warm baths, and strict abstinence. When collapse has taken place, we must employ stimulants, by giving them both inwardly and by rubbing them on the skin, or, what is much better, by injecting a diffusible one, such as camphor, into a vein, with the view of rousing the circulation, to enable us to draw more blood.—*Journ. Hebdom.*

XXX.

PERMANENT CONTRACTION OF THE FINGERS, CURED BY DIVIDING THE PALMAR APONEUROSIS.

DUPUYTREN has now performed this operation with complete success in upwards of twelve cases; and very lately he had a most satisfactory opportunity of confirming his opinion of the cause of this malady by dissection. An old woman died in the hospital; and it was found that three of the fingers were contracted. The skin of the hand and of the fore-arm having been very carefully dissected off, the aponeurosis was observed very distinctly to be drawn together. Wishing to shew that the distortion of the fingers was not at all dependent on any lesion of the tendons, Dupuytren divided them across, one by one; but yet the fingers could not be straightened: a direction was now carefully introduced beneath the palmar fascia, and this divided; and immediately the fingers could be bent back to their natural position.—*Journ. Hebdom.*

XXXI.

DISEASE OF THE HEART.

A MAN, aged 70, was admitted into the Hôpital de la Pitié, with the following symptoms—great emaciation, somewhat masked by a universal puffiness of the skin; complexion of a purplish hue; œdema of the ancles; dyspnœa; mucous râle; expectoration mucous and copious. Chest sounds well on percussion, except at the posterior and superior half on the left side, and at the præcordial region;—in these parts no respiratory noise to be heard; contractions of the heart feeble; a bruit de soufflet heard, extending to nearly the right clavicle. The pulse is rather small, 90 in the minute, and is slightly intermittent. The bellows sound is not perceptible in the arterial trunk, and is much more distinct in the points corresponding to the left, than to the right cavities of the heart. For five months the sleep has been much disturbed; the patient frequently awaking from frightful dreams—considerable orthopnœa.

Diagnosis. Hypertrophy of the heart, with contraction of the aortic and left auriculo-ventricular orifices, produced by induration of the valves.

Bleeding, laxatives, and digitalis were ordered. For a fortnight he experienced considerable relief; but soon after died, having been suddenly seized with a severe convulsive cough and bloody expectoration.

Autopsy. A large quantity of water was found in the cavity of the chest;—inferior lobe of the right lung completely hepatized; when cut into a sanious matter flowed out. The left lung is partly atrophied, being compressed by the heart, which lies transversely, and occupies a great part of the left side of the thorax. The pericardium contains a bloody serum; its inner surface is villous and unequal; where it is reflected over the heart, it is mamillated, red, and presents several small depositions of coagulated blood, and of false membrane, which form a thin easily separable coating, or layer.

The left ventricle, towards its base, is nearly an inch thick; columnæ carneæ much enlarged; its cavity of the size of a goose's egg; aortic orifice is contracted by cartilaginous incrustations; and the contraction is more obvious, in consequence of the increased capacity of the ventricle. The right ventricle is equally hypertrophied, and its walls are at least five lines in thickness, towards the base. Both auricles are dilated proportionally to the augmented size of the ventricles. All the cavities of the heart are filled with blood, partly liquid, partly in clots. The auriculo-ventricular orifices, and likewise the orifice of the pulmonary artery, are quite pervious and free;—only a few trifling incrustations are to be observed on their valves, and also on different points of the aorta. The weight of the heart, when all the large vessels are detached from it, is nearly one pound and three quarters, (800 grammes); its size is double that of a man's fist.

Reflections. This case is interesting on several accounts. The walls of the right ventricle are five lines thick;—Laennec never saw them to exceed four lines. The frequent inflammatory attacks on the lungs are probably referable to the blood having been driven into the pulmonary vessels with greater force; the bloody sputa, and copious expectoration, owed their origin to the same cause. The present case also proves that in a progressive enlargement of the heart this organ, by pressing on the inner surface of the pericardium, may induce a chronic inflammation, the pericarditis being thus probably consecutive to the hypertrophy of the heart; since there is reason to suppose that this latter affection commenced during the patient's youth. In other cases, we know that pericarditis will ultimately induce enlargements of the heart, just in the same way that chronic cystitis and gastritis will in course of time cause the muscular coats of the bladder and stomach to be amazingly thickened.—*Journ. Hebdom.*

XXXII.

CAUTION TO THE PUBLIC, OR HINTS ON SCARLET FEVER.

THE author of this brochure appears to be gifted with qualities somewhat akin to those of the late Lord Castlereagh, of whom it was said, that his chief merit consisted in maintaining an immoveable equanimity of temper, and in being able to discourse on any topic for an hour or two at a time, and when he had finished, none of his hearers could say what he had been speaking about. So it is with our unknown Durham friend; he has been anxious to make a book, and in this he has succeeded, for we have got no fewer than upwards of 150 pages of well-printed letter-press. Why, then, should he have concealed his name? and why should he voluntarily deprive himself of the "summi honores" of authorship—of seeing his name in print?

The sum and substance of the book is, that scarlet fever is infectious (who doubted it?)—that its virus is peculiar (who thought otherwise?)—and absolute (pray explain what is the meaning of an absolute virus?)—and that it is specifically infectious in its mildest, as well as in its most malignant form; an assertion which will not be contradicted. The author does not deem it worth his while to establish the truth of the above positions by any facts or observations drawn from experience; but vehemently commands conviction, by very copious snatches from multitudinous books. The readers, who, by the bye, are assumed to be chiefly the non-professional public, are referred to Heberden, Willan, Binns, Rosenstein, Maclean, Paley, Bacon, Herschel, Salt, Adams, Jameson, and a host of others: they are favoured with a few poetical extracts on metaphysical subjects, and their attention is particularly directed to the analogy and close affinity between the cholera morbus (that prolific parent of octavos and duodecimos) and those swellings about the anus vulgarly denominated "piles," or "emerods" in the language of the Old Testament.

We hope that none who peruse this sage Durham work may be, as we confess that we are, sitting in the shadow of darkness: we have strained our minds to cracking, in order that we might be able to comprehend the said analogy; but we have hitherto woefully failed; yet how can we refuse to yield our credence when such mighty men as Bishops Hall, Warburton, and Wilson; Ostervald, Pyle, Bryant, Lucian, and that most surprising author Gyraldus "de Miscellaneis Deis" are adduced to vouch for the correctness of the opinion!! Our motive for alluding to this very curious disquisition is that we are afraid that very few, if any, may ever chance to see, and if they see, to have the taste to read, our Durham friend's book. Moreover cholera is too interesting a subject to be passed over; our author's opinion is at least quite new, viz. that this scourge is probably the same as is described in the 1st Book of Samuel, wherein it is written, "And he destroyed them, and smote them with emerods, even Ashdod and the coasts thereof," "and ye shall make images of your emerods that mar the land." It may be observed that the affinity of the two diseases is made more striking by the very curious fulfilment of the command; as may be witnessed in the devices of the caricaturists of the present day, representing cholera, at one time as a "blue devil," and at another as an "emblem of starvation," for no other purpose, than to fright the land from its propriety, and to seize upon and maltreat the doctors.

But this allusion to the cholera is only incidental; it is one of the many subjects which the author, in the plenitude of his riches, touches upon and embellishes with his great learning. The trunk and main branches of the treatise bear the fruit of his opinions on scarlet fever, which we are informed was "one of those judicial visitations which were imposed upon the Egyptians in the time of Pharoah," and which has devastated the different countries of the world ever since. The section on the treatment informs us that at one time the lancet has been recommended, at another time, cinchona bark; and that the author highly approves of the cold affusion. But we have not leisure, or patience to extract any more common-place statements. We are verily of opinion that the marrow of the book might be put into a couple, or three pages. The author is no doubt a young man, at least in composition: his style, as well as the meagreness of novel matter, betrays him;—strained, verbose and grandiloquent, on a subject that requires only a homely and concise narrative.

He must in future guard against this error, and not introduce any similes about inundations and torrents to illustrate the course of an epidemic!! "Res, non verba," are wanted in the present day.

XXXIII.

DEFICIENCY OF THE CEREBELLUM.

M. **Combette** has communicated a very extraordinary case, in which the cerebellum, the crura cerebelli, and pons Varolii were altogether wanting. The patient, a young girl, was 11 years old when she died.—*Archives Géner.*

XXXIV.

ORGANIZATION OF PAGANINI!!

At a late "seance" of the Royal Academy of Sciences at Paris, the sapient auditory were entertained by a memoir on the above subject.

Dr. Bennati thinks that the modern Orpheus owes his excellency, not so much to practice, as to an original peculiarity in the organization of his outer man; he tells us that all the machinery of his arms is so beautifully pliant and moveable, that Nature evidently intended him for a great fiddler! Moreover, the trumpets of his ears are marvellously adapted for the reception of sound!!

His cerebellum is unusually large; (indicating his love for music we suppose!!) In short, ends Dr. Bennati, Paganini is an inimitable violiniste by the necessity of his corporeal structure!!!—*Archiv. Géner.*

XXXV.

Pathology of Epilepsy.

Mary L. aged 61, had been subject to epileptic fits, ever since her childhood. At six years of age, she lost the perfect use of the left arm and leg. Menstruation commenced at the usual period, but the frequency of the fits did not abate.

On dissection, the parietal portion of the dura mater on the right side, was converted into hard bone. The right hemisphere of the brain was nearly one half smaller than the left; the right lateral ventricle so much dilated, and full of water, that the cerebral substance forming the walls, was only a few lines thick; the thalamus opticus wasted on this side; the left hemisphere was nearly quite normal; the corresponding ventricle of its natural smallness, and the thalamus and corpus striatum healthy. The frontal and parietal bones of the right side were a great deal thicker than those of the left.—*Archives Géner.*

XXXVI.

Curious anomaly in the distribution of the Bloodvessels.

The infant was born with imperforate anus, and lived for seven days. Dissection shewed that the rectum terminated in a cul de sac, about an inch above the os coccygis, which was but imperfectly developed. From the arch of the aorta, was given off, first, a trunk common to the two carotids; next the left subclavian; and lastly the right subclavian arising from the extremity of the arch, and then crossing to the right side, between the œsophagus and the vertebræ; the abdominal aorta having supplied the cœliac, superior mesenteric, right renal (the left was wanting, and likewise the kidney of this side) and spermatic vessels, divided into two branches on the second lumbar vertebræ. One of these, by far the largest, and appearing to be the continuation of the trunk, gave rise to the inferior mesenteric, and then crossed to the posterior surface of the bladder, along the median line of which, it ran to the umbilicus, where it divided into two. The other branch situated behind the former, first followed the course of the sacrum, then was reflected upwards to the right sacro-iliac syuchondrosis, having first supplied branches to the left lower extremity, and left side of the pelvis. The continuation of this vessel, formed the right femoral. The system of the sympathetic nerves appeared to follow the irregularities of the arterial distribution—there being only one sacral ganglion, and no coccygeal.

M. Jodin, who has reported this case, is of opinion that the imperfect developement of the rectum was dependent on and caused by the imperfect development of the pelvic bloodvessels, and very properly directs the attention of medical men to examine whether the connexion always exists.—*Archives Génerales.*

XXXVII.

Retention of Urine caused by a Foreign Body in the Rectum.

A man aged 67, had suffered for several months from tenesmus and strangury, the urine dribbling away very slowly, and the desire to void it being very frequent. Many surgeons had attempted, but in vain, to sound him, with the view of curing a supposed stricture. On examining the rectum with the finger, a hard substance was discovered, pressing by one of its ends on the urethra; by the other on the coccyx; when removed, it was found to be the bone of a partridge, which, from the patient's account, must have lodged there for two months at least. He was immediately restored to health.—*Archives Générales.*

XXXVIII.

INFLAMMATION OF THE MEDULLARY SUBSTANCE IN LONG BONES.

THIS accident is by no means unfrequent after amputations of the extremities; and is of a most serious, and too often of a fatal result. If we examine the stump, we observe fungous granulations of a dirty grey colour from the divided surface of the bone; these are tender, if touched by the probe, for the membrane which lines the medullary canal is always inflamed in such a case. The morbid changes going on speedily effect the health of the bone itself; the vitality of which depends much more on its supply of blood from within, than from the periosteum outwardly. This is well illustrated by the difference in the results of injuries of the periosteum, from those induced by any lesion of the marrow and its membranes. In the former case, the depth of a thin shell, or exfoliation of bone is the extent of subsequent mischief; but in the latter, complete necrosis of the entire thickness of the bone is caused. Boyer relates an illustrative case. During the tedious healing of a stump, a cylindrical portion of the femur was thrown off spontaneously: the cause of this had been the ignorance of the dresser, who had every day been poking his probe into the medullary canal of the bone, mistaking it for a sinus. The patient ultimately recovered.

The dura mater appears to supply the place of the medulla to the cranial bones; for any serious injury, which causes its separation from the internal lamella, is speedily followed by the death of the bone at that part.—*Archives Générales.*

XXXIX.

MEMOIR ON CHLOROTIC DISEASES.

DR. BLAND thinks that medical men have always taken far too circumscribed a view of these diseases, by considering them simply as symptoms, or as the signal and result of amenorrhœa. "Do we not," says he, "observe them at all periods of life, in the male, as well as in the female sex, occurring too, even although the catamenia are regular; disappearing by the use of proper remedies, although this discharge remains obstructed? The real and specific cause of chlorosis, under all its Protean forms, is a vicious and imperfect sanguification; the blood being defective in crassamentum and colouring matter, and in consequence becoming less capable of imparting functional energy to the body. Four weighty reasons are adduced in proof of this doctrine. 1. Chlorotic maladies are almost always brought on either by whatever interferes with, or deranges the assimilation of the food and its conversion into the "pabulum sanguinis," as by living on unwholesome, and innutritious food, or by breathing a corrupted atmosphere, &c.; or secondly, by whatever enfeebles the system of the ganglionic nerves, which, we know, regulate, and keep in health the organ destined to form and to circulate the blood; such as all depressing emotions of the mind, masturbation, excess of venery, sedentery employments, &c. 2. The doughy, waxy whiteness of the skin, the pale lips and gums, the scanty and serous discharges from the vagina, nose, &c. and the watery state of the blood when drawn, all indicate the real nature of the disease, whose progress, 3d, is denoted by an utter want of power and activity in the organic functions of the body, arising no doubt from a deterioration of the fluid, wherein, it is said, that life resides. 4th. The efficacy of steel medicines, which have the power of restoring to the blood the "excitative" properties which it has lost, and which chiefly depend on its colouring matter.

So varied and so unsteady is the occurrence of symptoms in chlorosis, that it is almost impossible to define its characters within a single description. Sometimes the "anæmial" state of the skin, with slight general languor, are its only obvious characters; in some cases is added a lingering and wasting fever, which is not unfrequently attributed to visceral disease; in other examples, are intractable gastrodynia, not to be relieved by ordinary remedies; an asthma which defies all antispasmodics; a general tumefaction of the abdomen, and anasarcous state of the lower limbs; a restlessness and want of sleep, with, or without excruciating headaches, and murmuring noises in the head, against which depletion and counter-irritants are so commonly and so perniciously prescribed; or lastly, symptoms of diseased heart, which equally defy, what Hahnemann designates "antipathic" treatment, are a few out of the many ills and grievances, which have their time, seat, and origin in defective arterialization of the blood.

Dr. Bland, in very strongly recommending the different preparations of iron in chlorosis, does not assume any merit of discovery; he is well aware that it has been long the medicine in highest repute; but he very justly alludes to its not unfrequent want of efficacy; and is inclined to attribute this to the timidity with which it has been administered, and the improper forms, ill adapted to be received into the system, which have been employed. His favorite formula is thus—

℞. Ferri sulphatis,
Potassæ subcarbon. āā, ℥ss
Misce; in pilulas 48 dividend:

The dose at first is a pill night and morning, to be encreased gradually in a fortnight to 4 pills every morning, noon and evening.

Among the earliest marks of amendment is the return of colour to the cheeks and lips, and of animation to the eyes; the gastrodynia, want of appetite, sleeplessness, headaches, &c. are quickly much mitigated, or quite disappear. The breathing becomes easier, the pulse less weak and frequent, the strength increases, the anasarca of the limbs abates, and to cheerfulness of mind is added the feeling of bodily comfort and "bien-être."

From the long catalogue of cases enumerated in support of the author's treatment we shall select the following, one in a female, and two in male patients.

1. A. M. aged 21, had been remarkably pale ever since her birth; but the dirty waxen hue of the skin had increased for the last three years. The catamenia were regular, but very scanty and exceedingly light coloured. The health, however, was tolerably good; and neither the appetite nor the plumpness had decayed. By taking the steel pills in augmented doses for a month, she obtained bloom on her cheeks, lustre in her eyes, and vermilion in her menses!!

2. A. S. aged 57, had laboured under diarrhœa for eighteen months. He was excessively weak, and had a constant pain at the epigastrium. The skin, lips, and inside of the mouth were pale and exsanguine; pulse slightly febrile; no organic lesion of the abdominal viscera to be detected: the diarrhœa was checked by opiates; and the steel pills were afterwards continued for six weeks; the patient was restored to strength and health.

3. A. L., 27 years, had suffered from dysentery and ague during the late expedition to Algiers. His skin was blanched, his strength was utterly gone, his feet swelled at night; he suffered from oppressed breathing, and palpitations of the heart, and his sleep was uncertain and disturbed with dreams. No organic mischief was suspected, and therefore the symptoms were deemed chlorotic; the diagnosis was proved correct by the speedy cure under the use of the steel medicine.

It will be observed that the author very properly mentions in all the cases, that there was no organic disease; at least search was made, and none found;

for it would be altogether a most dangerous and improper practice that steel should be administered in every case of disease which was attended with pallor of the surface, and of the mucous membranes, with muscular weakness, and bodily and mental depression, without reference to any other malady which might be co-existent. Every experienced physician knows that these symptoms are every day witnessed in uterine cancers, in chronic gastro-enteritic affections, in indurated liver and spleen, &c.; and neither steel, nor any other medicine can minister to such diseased systems, the bloom, and strength, and activity of health! But, in uncomplicated chlorosis, long experience has taught him to regard almost as a specific, the combination of the sulphate of iron and subcarbonate of potass.—*Revue Médicale.*

XL.

Historical and Critical Remarks on the Means employed to stop Hæmorrhage after Amputations.

M. Velpeau prefers the forceps to the tenaculum for laying hold of and drawing out the artery; and it appears that the latter instrument is very seldom used in France.

He states that the main artery of a limb is sometimes so hard and calcareous, that it will crack, like glass, if a single small ligature is applied, as recommended by English surgeons; the better plan, in such cases, is to previously introduce a cylinder of linen, cork, or elastic gum into the vessel, or to employ the "rouleau de Scarpa," by interposing something between the artery and the thread.

The medullary arteries of the bone will sometimes continue to ooze out for a considerable time; pressure with lint for one or two minutes will generally arrest it. M. Velpeau does not approve of the practice of delaying to close the wound for some hours after the operation, in the view of guarding against hemorrhage from the small vessels, a practice which has been adopted by Dupuytren, Klein, and others. It appears that M. Koch, surgeon of the hospital at Munich, has never used a ligature after any amputation for the last 20 years:—he trusts to graduated compresses on the artery, and to a bandage rolled firmly from the trunk to the wound, which is then to be immediately closed. From 13 experiments performed on dogs, the inference drawn was, that if any foreign body is introduced into the divided end of an artery, the vessel speedily takes on a morbid condition, which renders it incapable of receiving blood, although it is not mechanically obliterated. Another hæmostatic method, and one which is less objectionable, is to pull the bleeding vessel out, and then twist it a little back, or in a direction contrary to its course; in excision of the mamma, the arteries may be easily secured in this manner.

M. Velpeau has tried torsion of the vessels after operations, and has found it to succeed very well. He states that, whenever the artery could be easily laid hold of and drawn out, so that it might be separated from the surrounding tissues, and retained either by the thumb and finger, or by a second forceps, while, with the other forceps, it could be twisted from three to eight times round on its axis, the chance of secondary hæmorrhage was not greater than if a ligature had been applied; and that he has not met, in his practice, with the inflammations and suppurations which MM. Delpech and Lallemand have urged in objection. He thus compares the two methods of torsion and of ligature:—The former is not always quite so secure; it is not applicable in all cases; it requires very considerable practice to execute it well and effectively; and, lastly, it occupies more time in its performance than the application of ligatures requires. On the other hand, no foreign body is left in the wound, and it should, therefore, favor primary union; but we must acknowledge that experience has not yet confirmed and sanctioned the correctness of this presumption. The patients operated on by M. Amussat himself have not recovered more quickly than after the usual method; and a result more favourable has not yet been obtained by any of the numerous surgeons who have given torsion a fair trial. On the whole, M. Velpeau gives the preference to the ligature; but admits that, occasionally, especially in operations in soft yielding structures, the hæmorrhage may be securely checked by simply twisting the vessels.—*Revue Médicale.*

XLI.

MEDICAL JOURNAL OF BRAZIL, PUBLISHED AT RIO DE JANEIRO.

THE first Number of the "Semanario de Sante Publica," or Weekly Journal of Public Health, has recently issued from the press at Rio, and augurs well of the zeal and observation of the medical men there. 'Tis, indeed, refreshing to the mind, to mark the benign influence which liberty diffuses over the intellectual, as well as over the moral energies of mankind; for, while the parent countries of Spain and Portugal are oppressed with despotism and sunk in apathy and indolence, their children of the New World are animated with a generous rivalry of scientific distinction. France, before the first revolution, had only one medical journal of any importance, and now she is the most prolific mother of periodicals. We shall extract one or two short articles.

I. HEPATITIS, ENDING IN AN ABSCESS, WHICH WAS DISCHARGED OUTWARDLY.

A. M. aged 20, had a smart attack of acute inflammation of the left lobe of the liver, which gave way to antiphlogistic treatment; but, although the febrile symptoms vanished, some tenderness of the epigastrium and right hypochondrium remained, which, in a few days, was followed by a soft, fluctuating swelling. In 15 days, the abscess was ripe for discharge, and it was, therefore, opened by the lancet. (N.B. The better method is that recommended by Dr. Recamier; viz. to employ caustic instead of a cutting instrument, for thus the adhesion of the cyst with the abdominal parietes is rendered more secure, and all danger of effusion prevented.) The suppuration was encouraged for a few days, and soon after, under simple dressings, the cure was completed.

II. PURULENT CYSTS IN THE CAVITIES OF THE HEART.

A. C. aged 21, had long suffered from indolent ulcerations of the legs, and presented a most cachectic appearance. He had symptoms of hydrothorax, and of diseased liver.

On dissection, the left lung was found completely wasted, and the left cavity of the pleura filled with a flocculent, serous fluid. The heart was enlarged, and when its cavities were laid open, numerous purulent cysts, varying in size from that of a millet-seed to a hazel-nut, were observed to line the surface of the left ventricle and auricle.—*Revue Médicale.*

XLII.

STATISTICAL RESEARCHES ON THE INCREASE OF POPULATION IN EUROPE.

M. MOREAU de JONNÉS states that the prolific powers of the human race are such, that from every marriage we may estimate, on an average, the birth of six children, of which two die usually in infancy, and the remaining four survive, marry in their turns, and become thus multiplying nuclei of population. To exhibit the ratio of increase in figures—the offspring of one couple is supposed to be 6 children in 33 years, 12 in 66 years, 24 in a century, 192 in 200 years, more than 98,000 in 500 years, and upwards of three thousand millions in 1000 years. According to this estimate, provided there was no impediment to the natural order and course of events, and no obstacle to propagation, a single family, living at the time of Charlemagne, might have peopled the whole of the inhabited world.

The experience of nations, however, gives a very different account of the increase of man in any given country:

thus Gaul, at the time of the Romans, contained about four millions of inhabitants, and it has required no fewer than 1860 years to raise the population to its present census of 32 millions; instead therefore of a couple doubling its numbers in 33 years, as above stated, 615 years, or about 18 times as long a period has elapsed, before such was effected; a calculation which supposes that the annual excess of births over deaths, is only one in a thousand.

If, as we have reason to believe, the population of the world does not exceed a thousand millions, it follows that it has doubled itself only 28 times since the period of the deluge; and that the average interval between each duplication has been 150 years.

The following is supposed to exhibit an accurate view of the progressive increase of population in the different countries of Europe.

	Years.
In Prussia the population has been doubled in	39
In Austria	44
In European Russia	48
In Poland and Denmark	50
In Britain	52
In Sweden, Norway, Switzerland and Portugal	56
In Spain	62
In Italy	68
In Greece and Turkey	70
In the Netherlands	84
In Germany	120
In France	125

From this table it appears, that if we group together the Northern countries of Europe, the average period taken to double their population is scarcely half a century; whereas it requires about 80 years for this purpose in the southern countries; the mean of both is nearly 57 years. We must observe that the term indicated in the table which we have just given is to be viewed only as an analytical census of the fecundity of mankind in different countries; and not as a correct announcement of the number of inhabitants which will be found at any particular date occupying such and such a country.—*Revue Médicale.*

XLIII.

NUTRITIOUS SOUP PREPARED FROM BONES.

M. **COSMENY** states that, in consequence of the events of July, 1830, the working classes in Rheims were reduced to great want, and means had to be taken to afford relief to upwards of 4,200 families in extreme indigence. An assessment of 23,000 francs was therefore laid on the inhabitants. M. Cosmeny had the direction of the whole. He established an immense apparatus for preparing soup from the boiling of bones; and in 133 days he distributed 301,910 rations, as follows. There were 212,800 rations of broth (potage) and bread; 35,000 rations of ragôuts made of potatoes with the fat of bones; and 26,600 rations of boiled meat; and lastly, 9,310 rations for the support of the cooks who were employed in the kitchen. The expense of each ration, including the charge for the apparatus, he estimates at 7¼ cents; the quantity of bones used every day was 480 pounds, which yielded 600 rations of soup, 18 ounces to each ration.—*Revue Médicale.*

XLIV.

CONTAGION.

Dr. **ESQUIROL** gives it as his opinion that all contagious diseases near the period of their decline, lose the power of propagating themselves; and he illustrates the truth of the remark, by the curious fact, that towards the termination of an epidemic variola, the matter of the pustules may very frequently be inoculated without effect; and that, as a general rule, all pestilences are more destructive and fatal when the miasmata are yet in small quantity, than when they afterwards become more diffused, and consequently more diluted.—*Revue Médicale.*

XLV.

DILATATION OF THE CAVITIES OF THE HEART.

CORVISART and all preceding physicians supposed that the invariable, and the only cause of dilatation of any of the cavities of the heart, was some mechanical impediment to the exit of the blood from them. MM. Louis, Bouillaud, Andral, and Pigeaux have, however, clearly shewn that this explanation will not always hold good. The cavity most frequently dilated is the right ventricle, and yet of all the openings communicating with the heart, that of the pulmonary artery is the least often found diseased; hence we may safely conclude, that there is no direct connexion or dependence of these two morbid states, the one upon the other. We must therefore search for a cause more general; and we shall probably be led to discover it in some change of the muscular and moving powers of the walls of the affected cavity. M. Pigeaux has observed that the right side of the heart is generally dilated in those who have died of asphyxia; and that the left ventricle when dilated, is usually hypertrophied at the same time; and that these morbid states most frequently co-exist, especially in old persons, with a diminished firmness and consistence of the substance of the heart, and with an ossification of the arteries of the trunk, or extremities. M. Piorry, who was appointed by the Academy of Medicine to report on M. Pigeaux' Memoir, thinks that an increase in the size of the right side of the heart is very often dependent on the circulation through the lungs being obstructed by tubercles, by hepatization, or by simple asthma, by fits of coughing, or by the efforts of vomiting. It is of great importance, therefore, in reflecting upon the causes which may give rise to dilatations of the right ventricle and auricle, to consider well, whether the pulmonary circulation has probably been exposed to an occasional or to a permanent interruption, or impediment of any sort; but M. Pigeaux deserves well of medicine in having established his opinion that dilatations of the heart are much less frequently dependent on some contraction of its orifices than has been generally believed. —*Revue Médicale.*

XLVI.

VARICOSE TUMOUR IN A VENOUS BRANCH COMMUNICATING BETWEEN THE TWO JUGULARS.

A MAN, aged 23, entered the Hôpital de la Charité under the care of M. Roux. There was a tumour situated immediately above the clavicle, of the size of a pigeon's egg, which was at first supposed to be an encysted tumour;—it was firm, elastic, and did not pulsate. The patient had noticed it for about two years, but it was only within the last two months that it had given him any annoyance. Its true nature was not ascertained before the operation; when cut into, a quantity of coagulated black blood flowed out, and the swelling was now discovered to be formed by the dilated vein. M. Roux put a ligature round it, and also around several thoracic branches. Fortunately the wound healed perfectly in a fortnight. In his clinical lecture upon this case, the surgeon remarked that varicose tumours of the veins of the superior part of the body are very rare; he had seen one case, under the care of Sir A. Cooper, in which the superficial veins of the fore-arm were immensely distended; and another had been mentioned to him very analogous to the present example; the walls of the internal jugular vein were found perforated with numerous small holes, and the swelling had been formed by the effusion of blood into the surrounding cellular tissue. These varicose tumours have a great analogy with the aneurism which Mr. Pott once observed in the neighbourhood of the popliteal artery, and which had been produced by the blood escaping from small perforations in the sides of the artery. Morgagni has seen the vena azygos equal the size of the superior cava in a case, wherein it had been ruptured and had caused the death of the patient by the effusion of blood into the right cavity of the pleura. Mr. Cline once met with a case of varix of the internal jugular, which burst and occasioned death by hæmorrhage. — *Journ. Hebdom.*

XLVII.

TUMOR—THE REMAINS OF AN OLD HERNIAL SAC IN THE SHEATH OF THE SPERMATIC CORD.

A MAN, aged 29, had a tumor in the spermatic cord, situated between the inguinal ring and the testicle, of the size of a walnut. It has been there for 15 years and given little annoyance till three months ago, when it began to increase in size and to become more painful. When carefully examined, it conveys to the finger the sensation of an enclosed fluid; the ring, cord, and testicle are not involved with it. The patient states that at first the swelling might be pushed up to, but never within, the original canal. It was considered to be either an encysted tumor of the cord, or the remains of an omental hernia, or a fleshy or scirrhous tumour. M. Roux extirpated it. On puncturing it, a quantity of pale yellow serum flowed out. Death, from fever, took place a fortnight after the operation, and on dissecting the inguinal canal, the omentum was found adhering all round to its circumference. M. Roux gave it as his opinion that the tumour which was removed, had been an old hernial sac, the open neck of which had been in course of time obliterated, and stated, that what tended to confirm this was, that during the operation it was found to be very much more coherent at its upper than at its lower part.—*Journ. Hebdom.*

XLVIII.

DISSECTION OF A PERSON WHO DIED FROM INANITION.

A PRISONER at Toulouse died after having refused to take food for 63 days. Universal emaciation; weight of the body about 58 pounds. Brain of a paler colour than natural; no water in the ventricles; cortical substance of healthy consistence; medullary substance of the cerebrum, cerebellum, and the medulla oblongata considerably firmer and denser than is usually observed. Heart of the ordinary size, but very pale in colour; soft and easily torn; lungs nearly normal; œsophagus contracted; stomach of its ordinary size, and containing an ounce or two of greenish fluid; mucous membrane adhering strongly; the thickness of the walls of the stomach and intestines sensibly diminished; valvulæ conniventes very distinct; hardened fæcal matter in the right portion of the colon; the rest of the intestines empty. The omentum reduced to a mere serous web, which was traversed by blood-vessels. Mesentery containing no fat. Liver of a healthy colour and size; its substance denser than usual. Gall-bladder distended with a black, thick bile, which was very like a strong solution of extract of liquorice. Spleen exceedingly small, almost round, with a diameter of about two inches; texture very dense and resisting pressure. Kidneys reduced in size, and of very firm consistence. Muscular system almost "annihilated," so shrivelled were the fleshy "ropes of life." Though no trace of fat was to be observed, the marrow was not deficient in the long bones.—*Archives Géner.*

XLIX.

ERUPTION OF ROSEOLA CAUSED BY THE USE OF COPAIBA AND CUBEBS.

A YOUNG man was ordered by M. Velpeau a mixture containing the balsam of copaiba, powder of cubebs and magnesia: he took it for six days, when he began to experience troublesome itching and smarting on the neck, chest, &c. &c. and next morning there was a full eruption of roseolous patches over his body. These patches very much resembled the rash of measles. By discontinuing the medicine, and keeping the body cool, the young man was well in a day or two.—*Archives Générales.*

L.

CASE OF LITHOTRITY.

BERENGER, aged 16, had laboured for many months under all the symptoms of calculus in the bladder, the presence of which was recognised by the sound. The instrument recommended by M. Civiale was used. It was introduced without difficulty, and only very slight pain was felt by the attempts to lay hold of the stone, whose diameter was two centimetres (nine lines.) When it was properly secured, the operator began to work the borer, by which the calculus was soon crushed to small pieces, and on withdrawing the instrument, it was found filled with the debris. The operation lasted only seven minutes. The patient was ordered a warm-bath, and while he was in it, he passed per urethram many calculous fragments, some of them being of the size of a pea, and causing considerable pain and smarting in the passage. After a few days quiet, a sound was introduced but no vestige of any calculus could be found; and since the operation the patient continued well. This is one of the very few cases in which lithotrity has succeeded in curing a person at one sitting.—*Archives Générales.*

LI.

OBSERVATIONS ON A SPECIES OF APOPLEXY, IN WHICH THE BLOOD IS EFFUSED IN NUMEROUS POINTS ON THE SURFACE OF THE BRAIN. By M. DANCE.

A YOUNG woman, aged 21, complained at first of a shivering, and of feeling as if she had been well bruised and beaten. In a day or two the symptoms of fever shewed themselves, but yet there was no fixed pain in the head. She was bled and kept on low diet. On the following day there was greater prostration; the pulse was weaker; she complained of pain all over her body, and did not refer it to any particular inward part; her arms, however, if moved gave her much distress and even sharp pain, like that of rheumatism; and when she was provoked by questions, she began to acknowledge that she felt an uneasiness in her head. On the following day slight delirium and general restlessness, with great prostration, drowsiness, inability to protrude the tongue; a purplish red hue of the face; heat and slight moisture of the skin; frequent, full, but feeble pulse; an occasional cough; an almost complete paralysis of the upper extremities; when they were raised, they fell down if not supported, and no effort was made by the patient; the head if elevated rolled down again on the pillow when the hand was withdrawn; the urine was passed involuntarily; she became quite comatose, and died next day.

Dissection. No serous effusion under any part of the arachnoid. At the posterior third of the left hemisphere near to the course of the longitudinal sinus was observed a patch of deep red colour, quite circumscribed, and of about the size of a shilling; the cerebral substance to the depth of two or three lines was involved in this patch, which appeared to be produced by a softening and breaking-down of the substance of the brain, and by being intimately blended with effused blood. When a small stream of water was allowed to play on this patch, an irregular excavation was left, the cerebral matter being washed away; the surrounding substance appeared quite healthy. A few lines distant from this spot, another not larger than the head of a large pin was noticed; and when examined attentively, it was discovered to be a minute clot of blood. On other places of the surface of this hemisphere were many more of these black points, in every respect like the former, and all presenting the mixed characters of ramollissement of the brain, and of hæmorrhage, as if small clots of blood had been infiltrated into the softened cerebral matter. This appearance was most conspicuous at the lower and back part of the hemisphere where it rested on the tentorium. On the right hemisphere, and also on the cerebellum, one or two similar dark-coloured spots were to be seen. The medullary substance of the brain, the ventricles, thalami, &c. were healthy; vessels not gorged. No other morbid appearances in the head, thorax, or abdomen.

Case 2. A woman, aged 25, entered the Hospice Cochin on the 9th of May. For six weeks previously she had laboured under dropsical swellings of the limbs; and latterly there was general anasarca. After shivering, followed by heat, slight delirium, and drowsiness, symptoms of more decided cerebral oppression supervened; the patient would not or was unable to answer questions; she did not appear to suffer from pain; the heat of skin was somewhat increased, and the pulse was more frequent than in health; tongue natural; abdomen soft and yielding.

Next day the stupor was more complete; but yet she could be roused to open her eyelids and answer questions, though indistinctly; the limbs have lost all spontaneous motion. On the 11th, symptoms worse; dilatation of the pupil; breathing laborious, as if the muscles of respiration had lost their power. The patient died, soon after, comatose.

Dissection. The surface of the brain and its investing membranes appeared quite healthy; but, on separating the hemispheres from each other, the corpus callosum was seen to be studded with minute red points; it looked as if any white surface had been sprinkled with red paint. On examining these attentively, it was speedily found that they were not produced by simple rupture and effusion, for pressure on the surrounding substance had no effect in squeezing out any oozing of blood; and there was no vestige of clots; their true nature was an intimate blending of the medullary substance of the corpus callosum with the colouring matter of the blood. From their minuteness, it was not very easy to ascertain whether ramollissement, or any alteration of the cerebral matter, was existent or not. With the exception of a few scattered red spots on the left thalamus opticus, similar to those just described, no other morbid appearance was detected any where.

Remarks. The attack in both cases has been sudden, and the progress rapidly fatal, unlike the instantaneous shock of apoplexy, arising from simple effusion. The embarrassment of speech, the lethargy and coma, increased from day to day, and death soon following to a state of general exhaustion and insensibility, are peculiar. The pathological appearances are to be considered as a sort of diffused capillary hæmorrhage, or circumscribed effusions of blood, which irritate and disturb the cerebral functions, instead of overpowering and oppressing them, as in ordinary apoplexy. Each of the bloody points described above is to be considered as a miniature of the extravasations which we observe so frequently contained in fissures or irregular cavities of the cerebral substance, after apoplectic and paralytic seizures. It is worthy of remark, that both of the narrated cases occurred in young persons, whose bloodvessels are more resisting than in the later periods of life. M. Cruveilhier has alluded to this form of disease, in the article "Apoplexia," in the Dict. Pratiq. de Medicine.—*Archives Géneralee.*

LII.

CHRONIC HYDROCEPHALUS CURED BY PUNCTURING.

A CHILD, aged four months, presented a well-marked case of this disease; the largest circumference of the cranium was 18¼ inches; the fluctuation was very perceptible at the fontanelles; for when pressure was made upon one, the other was distended and forced out. M. Graefe, compressing the larger fontanelle, plunged a large cataract-needle into the smaller one to the depth of the third of an inch. A little viscid fluid escaped drop by drop; he, therefore, introduced a very fine trocar, and immediately a transparent yellowish-brown liquid flowed out freely—uniform pressure was made on the head as the water escaped. When an ounce and a half had been evacuated, the infant began to faint and became extremely languid; the canula, was, therefore, removed, and a firm bandage put round the head. Stimulants were given, but the child was restless and ill for two days. A similar train of symptoms followed each operation, which was repeated generally at an interval of 12 or 14 days, and sometimes between two and three ounces were discharged at a time; the size of the head sensibly diminished, and the general health improved. The puncturing was repeated eleven times in the year 1829, on the following days—8th, 15th, and 23d of January, 19th February, 5th and 19th of March, 19th and 27th of April, 5th and 17th of May, 23d of June. The evacuated fluid was thicker and more coagulable towards the end of the cure. The smaller fontanelle and the sutures in course of time closed; the child became healthy and strong. When 10 months old it began to walk; and on the 26th of November, 1830, the child, aged 2½ years, was presented well and active to the Society of Medicine at Berlin.—*Graefe and Walther's Journ. der Chir.*

LIII.

THE ADVANTAGES OF REVULSIVE BLEEDING IN AFFECTIONS OF THE HEAD.

FORMERLY, in the schools of medicine, it was much disputed whether bleeding, local and general, had or had not a revulsive power; that is, of drawing the blood from other parts to that part whence the blood was allowed to flow. This doctrine includes the idea of derivation as well as of revulsion; and when the terms are applied to bloodletting, we mean by the former the abstraction of blood from the diseased part itself, and, by the latter, from a part situated at a distance. M. Chauffard, the author of these observations, states that he has often seen an inflammatory affection of the head aggravated by leeches to the temples or behind the ears, and relieved at once by drawing blood from the feet or ankles; he mentions several cases of acute ophthalmia, unchecked and uncured by local bleedings from the neighbourhood of the eyes, speedily disappear by the application of leeches to the lower extremities. The good effects are much enhanced by warm hip or foot baths; cold applications at the same time kept constantly applied to the head, and large doses of calomel. The following is an instructive example.

A young child had a very severe ophthalmia, which was treated by leeches to the temples, blisters to the nape of the neck, &c. The symptoms, however, did not abate, and the formation of pus in the chambers of the aqueous humour was the consequence. M. Chauffard ordered leeches to the ankles, followed by hot poultices, fomentations to the abdomen, a general warm-bath, while cold was applied to the head, and a dose of 15 grains of calomel twice a week. The pus was gradually absorbed, and vision restored.

As a general rule, our author states that, when a local bleeding near the seat of the disease does not at once relieve the symptoms by the evacuation of blood, and the depression thereby induced, the symptoms are always made worse. Otitis is uniformly most speedily cured by leeches to the anus, vulva, &c. or by opening the saphæna vein; cynanche will yield to one general bleeding, and will frequently resist a dozen applications of leeches to the throat. A hemicrania is often more severe after leeching the temples, and yet vanishes by a hot pediluvium; and every one knows that a neuralgia of the face is generally exasperated by local bleeding, for if the pain does not yield soon after the blood is drawn, the "engorgement fluxionnaire" of the cellular substance which surrounds the nervous twigs is increased, and the pain in consequence is agonizing. The excruciating headaches which succeed to a stoppage of the catamenia, are best relieved by the application of leeches to the vulva; an attack of coup-de-soleil, by opening the saphæna vein; the acute hydrocephalus of children by the same means.

We shall illustrate this by narrating a case.

A child, a year and a half old, was labouring under the symptoms of hydrocephalic disease. Pulse small, irregular, and threadlike; dilatation of the pupil; occasional flushes of the face; confirmed coma and insensibility to pain, occurring after an attack of hot fever, with severe headache. Three leeches were ordered to each ankle, and the leech-bites to be covered with hot poultices for several hours. The little patient revived somewhat, and, on the following day, the symptoms were more favourable, and the infant gradually recovered.—*Archives Générales.*

Remark. We direct our readers' attention to the above remarks, as illustrative of the good effects of revulsive bleeding in many diseases, but especially in those of the head. We are aware that many may and will object to M. Chauffard's opinion of its superior efficacy, and allege that local bleeding near the affected part would have probably been as successful, in the cases whose cures he ascribes to the revulsion of the blood to a distant part. It is a practice not common in this country, though much followed abroad, and, we are of opinion, with exceeding good effects, especially in those cases of cerebral disease dependant on an obstruction of any accustomed discharge.

LIV.

ACCOUNT OF CHOLERA IN PARIS.

THE disease in Paris, as in all other places, has committed far greater proportional ravages among the poor and ill-fed, than among those in more comfortable circumstances. Males have suffered much more from this scourge than females, and the aged and intemperate than the active and abstemious. Most of the victims have passed 30 years; still, however, many children and young pregnant women have fallen sacrifices. It has been remarked that in most, but certainly not in all, there were the premonitory symptoms of diarrhœa or some irregularity of the bowels, before the violence of the choleric attack. The seizure, in almost every case, occurred between midnight and four or five o'clock in the morning. The usual course of the symptoms has been as follows:—Borborygmi, uneasiness and pain of the bowels, followed by watery or whey-like stools, ejected by frequent squirts, without any effort, colic, or tenesmus; then succeed the watery vomitings and cramps; but these last have by no means been constantly present. Most patients have complained of a distressing pain at the epigastrium, increased by pressure, and frequently extending over all the belly; urine very scanty; restlessness; extraordinary prostration, almost to the annihilation of vitality, even although the evacuations were not very profuse; feebleness of the voice; cold of the whole surface and of the tongue; pulse feebly or not at all perceptible; face shrivelled and blue. Most of the patients who were brought to the hospitals, after having been 10 or 12 hours ill, were cold, pulseless, and cadaverised. An instance has scarcely been known of a recovery, after the pulse had ceased at the wrist.

The pathognomonic phenomena have been generally, great internal congestion; the stomach and intestines have been uniformly found abnormal in some respects, exhibiting either numerous red injected patches, or large ecchymoses; the secretory follicles were always enlarged. No feculent matter was ever found in the intestines; but, in its stead, the rice or barley-water-like liquid, which was sometimes tinged of a brown or reddish colour in those cases in which the intestines were ecchymosed. The blood had probably exuded and mingled itself with the watery secretion. In one or two, not the slightest trace of disease could be found on dissection. The urinary bladder was always contracted. No lesion has hitherto been remarked of the nervous plexuses and ganglia in the abdomen.

Treatment. The employment of stimulants has generally been followed in the stage of prostration and cold, but not with much success. M. Recamier and some other physicians have used the cold affusion as a stimulant; and it is reported that this method has had better effects in restoring warmth and circulation, than frictions and external heat. The above short sketch is taken from the Archives Génerales de Medecine for March; and we shall now lay before our readers, a more particular and circumstantial report of the disease, as it has been observed in the different leading hospitals of the French metropolis; and first we select one, or two cases from the Clinique of M. Broussais.

Case 1. F. Belleval a soldier, was brought to the Hôpital du Val de Grace at 9 P. M. on the 31st March. Extremities cold and livid, &c.; pulse thread-like; tongue red; intense thirst. He had been seized five hours before with cold shiverings; severe pains in the head, borborygmi, cramps, vomiting, but no purging—there was great prostration and stupor; but intellect unclouded. Treatment—dry frictions; 20 leeches to the mastoid processes, and 40 to the epigastrium; iced water to drink. The patient expressed himself relieved, in proportion as the leeches fastened. On the following day all the dangerous symptoms had vanished, and he gradually recovered.

Remarks. Though the above case may not be deemed one of concentrated cholera, it is worthy of being studied in connexion with the treatment pursued. If not the disease itself, it is only one degree of kinship removed from it.

Case 2 of cholera, or choleroid disease occurring at the same hospital, a month before it invaded Paris as an epidemic.

A man, aged 29 years, presented most of the symptoms of cholera: his extremities cold; his aspect cadaverous; racking and unintermitting pains of the bowels; borborygmi, profuse diarrhœa, and severe vomiting of a yellowish green matter—great tenderness of the epigastrium much encreased by pressure—pulse small, frequent and intermitting: skin cold; great thirst; very considerable exhaustion. Leeches were ordered to the epigastrium, and blood was drawn from the arm—the vomitings and diarrhœa soon ceased; and the pain was much mitigated; and the other symptoms gradually gave way.—*Hôpital de la Pitie.*

LV.

OBSERVATIONS AND EXPERIMENTS ON RESPIRATION.

THERE is a condition of the parts composing the organ of respiration, a knowledge of the influence of which on the function, must very materially modify the prevailing theory concerning it. This condition is the permanent patency of the air-passages and cells. It pervades every portion of the passages. The mouth nose and larynx having bony walls it cannot be denied to them; the trachea and main trunks of the bronchi being occupied by cartilaginous rings, must also have it awarded to them; but as the cartilaginous rings occur less and less frequently, the farther the tubes dip into the lungs, and, as at their terminations, none are to be found, so that the extremities of all the tubes are entirely membranous, their claim may be doubted. Yet it must be borne in mind that these tubes are strictly attached to the air-cells, and therefore must remain open as long as the cells continue so. It is well known that the cells are open after death; for they are found to contain a large quantity of air, at that period when the lungs are under the greatest degree of compression of which they are susceptible, whilst the thorax is entire and atmospheric pressure is excluded. They must be more expanded during life, to which state attention is at present solicited. In further proof of this point, it may be observed that, after death, when the utmost degree of compression which the ribs can permit exists, the tubes are not closed; for if the thorax be opened, the lungs shrink considerably, and air is expelled from the cells through the tubes, which it is clear could not be effected, were they closed.

This fact (namely, the ever-pervious state of the air-passages) established, the influence it holds on the function is next to be traced. It is identical with that of the tubes of an hydraulic engine, the common lifting pump for instance; in that, the tubes are ever full of water, and the water thrown up by the action of the piston, comes not immediately from the well, but was previously resident in the tube. In like manner, in the action of the organ before us, the air expelled by expiration comes not immediately from the cells, but is the contents of the passages. And, in inspiration, the atmospheric air drawn in descends not to the cells, but the air previously contained in the passages enters the cells, and the supply from the atmosphere takes its place in the passages. It is evident that all the air of an inspiration does not reach the cells, the seat of the function, and that if the capacity of the passages be equal to the bulk of an inspiration, none does. It is a question, then whether any, and if any, how much, is employed in the function?

To answer this question with full satisfaction, it is necessary to be in possession of the exact measure of the capacity of the passages, and of the bulk of an inspiration. Who shall presume to determine the amount of an inspiration, when men of so great physiological knowledge, are so discordant in their statements as they have been? In this dilemma, there is no alternative left, but to take the highest estimate which any one of them has given, and that is 56 cubic inches. It must then be enquired whether the capacity of the passages be equal to that?

The state of the lungs is ever varying; the tubes are always contracting and expanding; the time when the measurement is to be taken, is when an inspiration has just been completed, before expiration begins. Then the diaphragm is contracted, and the abdominal viscera pushed downwards; the ribs raised; and the thorax enlarged, the cartilaginous bronchi, incapable of diametral enlargement, are stretched longitudinally; the cartilaginous rings receding from each other, the membranous portions are both distended laterally, and drawn out lengthwise. The cavity of the thorax, thus expanded, is filled by the lungs, and throughout their substance the tubes ramify, from their root, at the termination of the trachea, to countless points on their whole circumference touching the boundary of the cavity. Their size, too, is not inconsiderable; dissection shows them several lines in diameter; and it must be admitted that, before they can be examined in this way, they have much contracted, and lost, at least, one fourth of their bulk. It will be seen to be impossible, contemplating the figure of the lungs so out of all order, and the distribution of the tubes so perplexed, to come at a precise valuation of their capacity. A probable one, is the utmost to be obtained. If it be granted that the bronchi, cartilaginous, are capable of containing 40 cubic inches (it is contended that this is a low computation) then the second position, viz. that none of the air of inspiration reaches the cells, is established; for no person will refuse 12 cubic inches of contents to the mouth and nose; and four to the larynx and trachea; making together 56, equivalent to the bulk of an inspiration, none of which, therefore, can pass beyond their limits.

Taking it for granted, because physiologists agree on this point, more than on any other in connexion with the subject, that inspiration and expiration are equal in bulk—that atmospheric air is an agent in the function—and, seeing that, in the functional process, some of the air taken in must necessarily be dissipated, an anomaly seems to present itself. It will be solved hereafter. At present, another difficulty claims attention, which is raised by the presence of carbonic acid gas, in mixture with the expired air, which it is said to receive from the blood; but whence it cannot receive it, if it enters not the cells. The following experiment will remove the difficulty.

Two long narrow glass jars, each containing 120 cubic inches were procured; a hole was drilled in the centre of the bottom of each; the bottoms ground plane. They were attached bottom to bottom, by means of gas lute, with the holes in apposition. A piece of wood, having one end tapered, as a plug for the holes, and long enough to extend without the mouth of the jar, was fixed in the holes. Two stopcocks were affixed to a bladder, one at the neck and the other at the fundus, so as to inclose a space capable of containing ten cubic inches. The bladder was filled with expired air expelled immediately after having made an ordinary inspiration; it was passed from thence into one of the jars; the operation was repeated till the jar was full; and its mouth was then stopped. Here was collected a quantity of air which had been inspired, and expired, each portion was the last taken in, and none of it had passed beyond the mouth and trachea, if it therefore contained carbonic acid, from some substances within these parts it must have obtained it. The empty jar was filled with transparent lime-water, the plug withdrawn, and the mouth stopper applied, the lime-water dropped slowly through the air, and the air rose in small bubbles through the lime-water, the jars were turned several times. At length the bottom holes were again stopped, fresh air and lime-water introduced into the jars in like manner as before, and the whole process renewed, taking care to retain all the chalk deposited. These operations were continued till a considerable quantity of chalk was collected.

This experiment affords proof that the carbon of expiration is not all received from the blood in the air-cells, but that a portion at least is derived from substances within the passages. So far it is conclusive, but it is desirable to find the substance which produces it, and the method by which it is generated; the following hypothesis is offered in explanation.

The only matter to be found in the passages is the mucus, poured into them by proper secretory organs. Physiologists say that all the fluids of the body contain salts in the alkaline state, except the mucus of these passages, in which they are in the neutral state. It is assumed for proof is not attainable, that this particular fluid is also sent from secretory organs having alkalies in solution, that having all favourable circumstances in attendance for the purpose, the oxygen of the atmospheric air is attracted by the alkali, that carbonic acid gas is disengaged by the new combination, mixes with the air contained in the passages, and is expired together with it. Whether this explanation be received or not, still it is no less certain that carbonic acid is generated in the passages, and that it can emanate from no other substance than the mucus thereof. A very large proportion of the bulk of the lungs consists of cells, their dimensions are enlarged by inspiration, and lessened by expiration, and the variation of dimension is in exact proportion to the amount of air taken in and expelled by these two acts; still they are in every state full of air.

It is in the cells that the function is exclusively performed: air is an agent in the function: the air which inhabits them must be that agent. The method by which this air is supplied, and its use in the function must be explained.

It has been supposed that the quantity of air expelled by expiration is the same as that taken in by inspiration, and taking it for granted that air is an agent in the function, and seeing that no air is dissipated in the operation thereof, an anomaly was suspected, for the universal order of nature, especially throughout the animal system is, that all matters in action suffer waste, but in the instance before us it seems to be interrupted, for if the air taken in is returned without diminution of quantity it loses nothing. If it be shown that the expelled air differs from the inspired only in quality though not in quantity, or that its bulk is increased by addition during its stay in the lungs the difficulty will be removed.

It is vulgarly known that the air or breath comes from the lungs loaded with a large quantity of vapour, it is true vapour is condensed as soon as it comes in contact with the external air, vapour which is only in simple mixture with the air of respiration, but vapour holds place in warm air in two ways, first by simple mixture, and secondly by chemical combination; in the latter case the water is not separable from the air except by chemical decomposition. No circumstances can be conceived more favourable for this combination than those existing in the lungs, contact of steam and warm air, and pressure.

The thermometral temperature of breath was ascertained to be 76°. Temperature of room 62°. Temperature of water in the pneumatic trough was raised to 76°. A bladder capable of containing 30 cubic inches, having a stopcock at the neck and another at the fundus, was filled with atmospheric air, the nozzle of one stopcock closed was fixed in the mouth of the double jar, and the whole of the other taken into the operator's mouth. The air was inhaled into the lungs, immediately expelled into the bladder again, and thence passed into the jar; the jar was filled by repetitions of this process, and left with the under mouth open in the water. At the expiration of twenty-four hours 11 cubic inches of water had risen into the jar. Four drachms of caustic potash were put into the jar, and five inches more of water had entered in twelve hours. A change of weather afforded an opportunity of repeating the experiment with advantage. The temperature of the room was 72°, —of breath 82°,—in nine hours 12 cubic inches were condensed—caustic potash absorbed six more.

These experiments demonstrate what was clear enough before, that atmospheric air taken into the lungs is there increased in temperature, and therefore in space, and that it is further increased in quantity by addition of water in the state of vapour; the necessary result of which must be, that as the same bulk of air is returned as was inhaled, some of that which had been inspired must be left behind, expiration being finished, and the quantity left must be exactly equal to the increase of bulk attained through increase of temperature, and through addition of vapour. Caloric expands, and vapour takes the place of atmospheric air so expanded, detaching a quantity proportionate to its own bulk, so that this amount of displaced air remains in the lungs after expiration is completed.

But it was conjectured that the foregoing experiments did not declare the full amount of air left behind, and the following confirmed the conjecture.

Three large bladders were procured, and two circular pieces of wood, grooved at the edge like the wheel of a ship's block, and perforated in the centre by a hole half an inch in diameter; two bladders were attached to each piece, so as to maintain communication with each other by means of the holes. To the opposite extremity of one of the last bladders in the line a stop-cock was fastened. This apparatus was filled with atmospheric air amounting to 350 cubic inches. This air was drawn into and expelled from the lungs by 70 inspirations and as many expirations, one of the last succeeding each of the former, the whole was left in a cold cellar 24 hours, at the expiration of which time upwards of 100 cubic inches were found to have been lost, being about 1½ cubic inch from each inspiration, and this under the influence of simple condensation alone; the air still held water in chemical combination, and it will not be overlooked that if this had been removed by decomposition, the result would have been much more favourable.

The residual air then is supplied by the respiration, and a quantity equal to that lost is consumed by the function during the time occupied by every act of respiration.

Concerning the use of the residual air, it is concluded from the foregoing inquiry, that air having once entered the cells, never returns into the atmosphere, but on the contrary is constantly receiving accession from it; indeed, were there no waste, and the same quantity were returned as had been received by the different acts of the organ, the residual air would ever be the same, unvarying in quantity, a portion of it would only change place, at expiration a portion sufficient to fill the space left by the air just expelled would rise from the cells into the passages, and at inspiration it would return to the cells, and make room for the atmospheric air that enters. This would be the mode of procedure if the capacity of the tubes and bulk of inspired air were equal, or if the latter exceeded the former, but if the capacity be inferior to the bulk, then a portion of air equal to the excess of bulk over capacity rises from the cells, and is thrown out of the mouth at expiration, and a like quantity of fresh air descends into the cells at inspiration, but the greater part of the contents of the cells moves to and fro as in the former case, the result would be scarcely different. Whichever then may be the state of the case, we cannot hesitate to admit that the residual air is the only inhabitant of the cells, and as it is universally known that the function is carried on in the cells and in no other part of the organ, the residual air must be regarded as the only agent in the process of renewal of the blood.

The air receives caloric in the passages, acquires much increase of temperature, and consequently much augmentation of bulk; the air expired, indeed, on account of its short stay, is not much affected, but the alimental portions taken from each inspiration and the residual gain the temperature of the body. A quantity of water in the state of vapour becomes mixed with it—another quantity of water becomes chemically combined with it—its oxygen is continually attracted by a substance residing there, and entering into new combinations—and carbonic acid gas is continually being generated, and mixing with it. All these changes are known to be in progress, because all expired air is increased in temperature—has water mixed—and in chemical combination—and exhibits loss of oxygen—and acquisition of carbonic acid. These changes are effected upon the air of inspiration during its momentary stay in the passages, and they must be more considerable upon the alimental and residual portions, which having once entered the passages never return. The alimental portion descends into the cells, and comes into action on the blood in this altered condition.

Two ox lungs were procured, they were cut into narrow strips in the pneumatic trough, under a glass jar, and as much air as could be expressed was collected. A large coffee-mill was fastened to a log of wood, this was inverted in the trough, each strip of lung passed through the mill, and the air set loose directed into the jar. Into a jar full of this air, ignited charcoal was introduced, it was speedily extinguished. Phosphorus would not burn in it. Lime-water was poured in, and shaken together with it; a copious precipitate of chalk took place. Into a jar containing another quantity of the air a solution of sulphuretted hydro-sulphuret of potash was poured, and after shaking, and opening the mouth of the jar under water, it was scarcely perceptible that any water rose in the jar. In the jar again filled with another quantity of the air deprived of carbonic acid by means of quick lime, caustic potash was suspended, and the mouth of the jar sunk in water, after a few hours much water had risen. Thus it was ascertained that the residual air consists of water in chemical combination with it,—of a large proportion of carbonic acid gas; perhaps it contains no oxygen, and if any, a very small portion. What other gases it contains was not discovered through want of acquaintance with chemical manipulations.

A summary of the facts thus produced is this. But let it be premised, that the tubes ramify in the lungs, and terminate at about an inch distance from each other on their surface,—that the cells are placed in rows parallel with them, and all around them,—that the cells in contact with the tubes communicate with them by means of pores in the sides of each,—and that the cells communicate with each other by like means.

In the ordinary process of respiration there is a pause, the moving powers rest after expiration has been finished, and before inspiration begins; in this state let the organ be contemplated: the cells and passages are all full of air. The muscles of inspiration are called into action—the cavity of the chest is enlarged—the cells are expanded—each cell is affected in an equal degree—the line of cells in the centre of the space between tube and tube attract air from the cells in contact and communication with them—these last also from others attached to them—each row in succession does the same—the last, or those in contact and communication with the tubes, attract from them—the membranous tubes expanded in circumference, and elongated attract from the cartilaginous bronchi—these enlarged in length attract from the trachea, mouth, nose and atmosphere.

This will be the course of procedure whatever may be the relative capacity of the parts, and the amount of air taken in. But in the succeeding act of inspiration it will be necessary to consider it in two different relative states of capacity, first as though the volume of air inspired exceeded the capacity of the passages, and secondly as though it was equal or inferior to it. Following then the progress of the function, bearing in mind that inspiration and expiration are supposed to take in and send out an equal volume, these will be found to be the mode of proceeding, and result under the first consideration. The muscles of expiration act, the air is propelled from all the parts in the order in which it entered them reversed, all the air contained in the passages is sent out through the mouth and nose, and as much from the cells also as is equal to the excess of bulk of inspiration over and above the capacity of the passages. Say, for instance, that the capacity of the passages is 30 cubic inches, and the bulk of inspiration 40, then ten cubic inches of air will rise from the cells and be thrown out of the body. Besides this portion of air, another will rise from the cells equal in magnitude to the capacity of the passages, and occupy them; the cells too will remain full of air. The inspired air during its stay in these parts gives away part of its oxygen, which uniting with carbon existing in the fluid contained in them, forms carbonic acid, the new compound being of equal bulk with the oxygen which disappears. The air obtains also a quantity of water in the state of vapour. This body of air so changed, and augmented by addition, is further swelled by the expansive quality of heat, to which it is here exposed. A quantity of air equal to the magnitude acquired by these means is left behind in the passages after expiration, and besides it will be found that expiration is not really equal to inspiration, consequently another portion equal to the excess of inspiration over expiration is also left behind. This quantity of air so changed, deprived of some of its original components, and increased by addition of other matters, remains at the top of the column, in the mouth and nose, at the end of expiration, at the succeeding inspiration descends again into the cells, again at expiration ascends, but now not so high as its former position, by as much space as it at first occupied, a fresh quantity occupying that which has taken the same course and undergone the same changes as itself; at each succeeding inspiration it descends deeper and deeper, and at each expiration rises less and less high, till it is spent in the object of the function. From the time of its entrance by the mouth, till it is wasted, it travels an incalculable number of times up and down the passages, and it must be plain that as the expired air undergoes so considerable a change during its momentary visit in the passages, this suffers an incomparably greater; perhaps it loses all its oxygen; it is known that it obtains carbonic acid, and a large quantity of water, in a state the most apt for using its affinities, and forming fresh unions. We know that the nitrogen returns unchanged and undiminished, but we do not know whether the nitrogen, carbonic acid and water, form any new compounds amongst themselves, or with other substances when they come into communication with the blood. The conjecture that they do carries with it much probability from the length of time they are returned in the passages and cells, subject to all the means of synthesis, and exposed to agitation, such a powerful auxiliary of the purpose.

It has been seen that in this first assumed state of relative capacity of the passages and bulk of air a portion of the air, equal to the excess of the last above the capacity of the other, will have entered the cells. It may be objected to the present hypothesis, that this portion receives all the carbonic acid, contained in expired air, from the blood, to which it is in them exposed, and that all the oxygen lost is there given to that fluid. To this objection, the first experiment is a full answer; and it may be stated, in corroboration, that the same fluid (mucus) is poured into the cells as is found in the passages; therefore the same change takes place in them as in the passages, by the same process, between the same substances.

If the second supposed state of parts exists, namely, if the magnitude of inspiration is equal or inferior to the capacity of the passages, then the same course of procedure will be observed, and the same result follow, as in the former case. This has been traced and pointed out above, except that none of the air will enter the cells or come in contact with the blood, and all the changes effected upon it will be wrought within the passages only.

This account of the result of the process has reference only to the air expelled by expiration; but in this second supposed case, as in the other, there is a portion left behind by each act of expiration, which has been designated alimental, because it maintains the residual, the most important, vitally important, part of the air of respiration, the only part which has influence in the function, none other coming into contact with the blood of the pulmonary artery. Each alimental portion takes the same course, and rises and sinks in the same manner in the passages in this as in the former, and undergoes the same changes; the only difference is, that whereas, in the first, some of the atmospheric air taken in by inspiration goes directly to the cells, and is there exposed to the blood, and is expelled into the atmosphere by the succeeding expiration; in the second, all the air taken in by inspiration is confined to the passages, and all, except the alimental portion, is again expelled by expiration, without coming in contact with the blood in the cells, the seat of the function.

LVI.

CASE OF TIC DOULOUREUX, PRODUCED BY A SCIRRHOUS TUMOUR ON THE BASE OF THE BRAIN. By JAMES HEYGATE, M.R.C.S.

MRS. B. aged 53, the lady of Capt. B. R.N. had been troubled some time with chronic inflammation in both eyes, and though the conjunctiva was considerably suffused with red blood, and lymph thrown out on the cornea, she felt no pain in the eyes. This inflammation reluctantly gave way to the usual remedies. She then complained of pain in the left side of the head, over the temple. This continued (with temporary relief from bleeding, blistering, &c.) for a few weeks, when the affection began to put on a more formidable appearance, and was marked with all the characteristic symptoms of that most painful disease "tic douloureux." Paroxysms of severe pain extended over the cheek bone, just below the orbit, the alæ of the nose and the upper lip, which was considerably drawn up, shewing the second branch of the fifth pair of nerves to be affected. The line of demarcation was most clearly drawn, the nerves of that side of the face being implicated only. The pain was not attended with any discoloration of skin, only numbness, and occasionally the cheek and temple were puffed. Pressure neither gave pain nor produced relief: severe fits of pain would sometimes reach the ear, which led me to suppose that the portio dura of the 7th pair of nerves was affected. The digestive organs, in the earlier part of the attack, were not deranged. Thus things went on, with nothing decidedly and unequivocally to lead one to suppose that there was organic disease at the base of the brain; but my suspicions gradually began to strengthen, when no real, or hardly temporary benefit, followed the use of the most approved remedies; such as, externally, counter-irritation by blisters, tincture of iodine,

&c.; internally, carbonate of iron in large doses, and for a long continuance. Then followed arsenic, quinine, and, in fact, the whole catalogue of medicines usually recommended; anodyne plasters applied down the face, with fomentations of like matters, together with opiates taken internally, gave the only perceptible relief.

After suffering for about four months in this way, it was perceived that the left eye-ball began, by degrees, to protrude, till it was pushed out to a very considerable extent. Whilst this was going on, the power of vision in the eye became completely lost; then followed, at first in a trifling degree, and then more and more profusely, an acrid discharge from the left nostril, of a very offensive nature. It was now clear that there must be ulceration; and, from the nature and seat of the pain, I concluded that this ulceration was where the nerves supplying the face and head make their exit from the brain. During this time, it was obvious enough that diseased action was extending its ravages; the glands on each side of the neck became much enlarged, and ultimately encroached on the œsophagus—so much so, as to render the passing of fluids only allowable.

After the discharge from the left nostril had continued, and increased in offensiveness, for about three months, bloody matter began to flow from the right nostril also, and the sight of the eye on that side gradually diminished. Thus things went on, from worse to worse—the tumour in the neck increasing. If asked about her head, she would say there was a feeling of torpor and heaviness, not to be described. The discharge of matter was occasionally very copious, and when it did not issue so freely from the nostrils, it passed into the pharynx; and, as swallowing was very difficult, it frequently produced a sense of suffocation; latterly, it seemed *insensibly* to pass into the stomach and through the bowels. She became extremely emaciated; and, after suffering the most excruciating agony with exemplary patience, and with only short intervals of ease, for upwards of a year, she was seized with a diarrhœa (which had frequently before threatened), and which now terminated a most deplorable state of existence.

Post-mortem Examination of the Head. On dividing the dura mater, and gradually lifting up the brain, I discovered a tumour at the base, about the size of a pullet's egg, resting partly upon the left crus cerebri and tuber annulare. On cutting into the tumour, it appeared of a hard, white, cartilaginous consistence; the surface of the tumour, on the fore-part, was ulcerated, as were the parts of the ethmoid and sphenoidal bones adjoining. The great pressure on the left optic nerve accounted for loss of sight; and ulceration had extended along the course of the optic nerve, and matter was seated behind the eyeball: ulceration had extended itself to the right optic nerve and underneath; and this may account for the sight of that eye, in the latter part of the illness, giving way. The scalpel, through the ulcerated parts, passed very readily into the nostril and left eye-ball. A short time before her death, pieces of slough were removed occasionally from the back part of the mouth. There was more water in the ventricles than is usually found. No other deviations from health were observable in the brain.

Two or three conclusions may be drawn from this case:—1st, That it had some connexion with the catamenia, which continued till within two years of her death; and, as Mrs. B. had occasionally complained of a dull pain, and odd sensation above the left eye, probably this tumour might have begun to form some years, as, when well, she frequently expressed a wish to her maid that her head should be opened after her death, feeling convinced that there was something uncommon to be found there, from what she frequently felt; and wherever there seems to be a fixed determination (however slight at first) for diseased action to continue, our prognosis should be doubtful.

LVII.

Mr. Rainey on Arsenic.

To the Editor of the Med.-Chir. Review.

1, *Maze Pond, Borough.*

Sir, As I believe no process has hitherto been described by which the oxide of arsenic and antimony may be reduced to their metallic state by the agency of galvanism so as to afford an easy and satisfactory test of the presence of these metals in minute quantities, I have been induced to send you the particulars of some experiments which I lately made for the purpose of supplying this deficiency in toxicological chemistry. Should you consider these experiments sufficiently conclusive, and the subject one of interest enough to merit a place in your Journal, you will oblige me by inserting this letter in your next number.

If two or three grains of arsenious acid be dissolved in two drachms of strong liquor ammoniæ and six of water, and a drop of this solution mixed with about half as much liquor ammoniæ be put upon a piece of polished silver, and these brought in contact with a clean piece of zinc, and detained there for a minute or two, decomposition of the arsenious acid takes place; the oxygen appears to be attracted by the zinc, which is discoloured, while the metallic arsenic coats the silver. Nearly all that part of the silver which was covered by the solution, excepting the point of contact of the metals, receives a coating of arsenic: hence in the employment of this test for very minute quantities, the solution should be spread over as small a portion of the silver as possible. The colour of the arsenical coating varies a little according to the quantity of arsenic, but though the quantity may be ever so small, even the 3,000th part of a grain, the metallic lustre will be distinctly visible. After the reduction has been effected the excess of ammonia must be washed off immediately by immersing the silver in water, otherwise the arsenic will be dissolved. After all the ammonia has been removed the metallic arsenic will be found so firmly adherent to the silver, as to be with difficulty separated. If a drop of pure aqua ammoniæ be put upon the arsenical coating, it will gradually dissolve the arsenic, and this solution placed upon a piece of glass may be made to exhibit the presence of this metal when tested by the nitrate of silver or sulphate of copper. It will also exhale the alliaceous odour if collected in a sufficient quantity and ignited with charcoal. A very weak solution of tartrate of antimony may be tested in the same manner. The metallic coating which this salt imparts to the silver may be easily distinguished from arsenic both by its colour, and more satisfactorily by the easy solubility of the latter in liquor ammoniæ, which does not affect the former. The decomposition of the sulphate of iron and copper, the muriate of cobalt, nitrate of bismuth, the nitro-muriate of platinum, and probably several other metallic oxides, can be effected by means of a similar employment of galvanism; but these which have been named differ from antimony and arsenic in not requiring the aid of ammonia to decompose them. The manner in which ammonia contributes to assist the decomposition is probably by yielding hydrogen to the oxygen of the arsenic, and perhaps too by acting slightly upon the zinc, it increases the galvanic action of the metals. Minute bubbles of gas are apparent about the point of contact of the zinc and silver, which from their remaining involved by the solution may be presumed to be nitrogen. To ensure the efficacy of this test, the silver, and more especially the zinc, must be kept perfectly clean and bright, otherwise the latter covered with a small portion of arsenic from a former experiment, when brought in contact with the silver might give it a coating of metallic arsenic, and lead to mistake or uncertainty. If the arsenic acid has been previously mixed with tea, broth, or porter, it still suffers decomposition on the application of the foregoing test, though in a slightly diminished degree, unless the quantity of arsenic be greater than that already named.

G. Rainey.

May 23, 1832.

P.S. The arsenical coating may very conveniently be tested by the addition of a small quantity of slightly diluted nitric acid to it, and afterwards dissipating the moisture by the heat of a spirit lamp. The acid, when first applied, detaches the arsenic, which soon becomes oxydized and combining with the silver, coats it with a greenish-yellow crust. As a piece of coin was employed in this experiment, the green colour may be attributed to the copper which had been mixed with the silver.

LVIII.

DRS. VIVENOT, SEN. AND JUN. ON THE CHOLERA OF VIENNA.

IN our last number we published the letter of Dr. Yates (see page 607), accompanying the translation of a paper by the above-mentioned eminent physicians of the Austrian capital—a paper that was first solicited by the Board of Health here, and afterwards refused insertion in the Cholera Gazette, because the writers were non-contagionists! We regret that the press of matter, and the lapse of time prevents us from giving more than a short extract from this interesting document, to shew that the physicians of Paris were not the only people who denied contagion in cholera on the Continent.

"The observations which chiefly lead us to the conclusion that the disease is not contagious, are as follow:

1. Without having recourse to any kind of preservative, having left the house fasting, we exposed ourselves freely and unreservedly to the influence of the disease at a time when it was at its highest; and, during the first days of the most violent raging of the disease, we came in the most perfect and nearest possible contact with the patients, and even had our faces and clothes soiled by the rejected contents of their stomachs; and then we would often remain fatigued, exhausted, and deprived of sleep for days together, but still in the enjoyment of the best of health up to the present hour.

2. By reason of our very numerous avocations, and the hurry and pressure of business, we were prevented either cleaning our clothes, washing with vinegar; or having recourse to any other similar precaution, after having visited the sick on any one occasion; and yet we do not know of a single instance in which the disease had been carried from the Cholera Hospital (No. 2 in the town, the care of which was intrusted to my father, Dr. Vivenot) into private practice, either by himself or me, who inhabited the same house, and had, moreover, the charge of a district of the town, containing a population of 14,000 persons. We seldom found that nurses (and especially those whose duty led them to attend on cholera patients) were attacked by the disease; and when it did so happen, it could generally be traced to other causes, to wit, improper diet, previous indisposition, timidity, anxiety, or other contending emotions, which predispose to, and are themselves exciting causes of, the disease.

3. Locking up and seclusion did not prevent the spreading of the disease. On the contrary, those persons who did so, and imagined themselves safest, frequently fell a sacrifice within the very walls of their supposed asylum, in consequence of an anxious separation from their friends and relatives; and were so much the more certain of the epidemic, as they were the victims of their *fears*.

4. The falling sick of cholera of several individuals of a family, or of various persons in one and the same house, depends upon, and is to be attributed to, sorrow, anxiety, or fright, which all excite the disease; a circumstance which by no means speaks for the contagious nature of the epidemic."

A perusal of the paper from the pens of the Doctors Vivenot has impressed us with a high opinion of their talents and judgment, as physicians and philanthropists.

LIX.

BROUSSAIS' LECTURES ON CHOLERA.

IT was to be expected that the numerous disciples of Broussais would press their master for some declaration of opinion and practice, on such a destructive epidemic as that which has lately scourged the French capital. Accordingly the professor of the Val de Grace has delivered two lectures on cholera, that have attracted considerable attention on the Continent, and even here, where we had the advantage of priority in observation. We can only abbreviate the professor's chief ideas.

I. M. Broussais believes that the disease has reigned in Europe at former periods (à d'autres époques), and that it is the same epidemic which, in the fifteenth century, was called the "black plague." The professor seems puzzled how it should have travelled from India by way of Russia, instead of coming by a much quicker journey with the English ships and commerce! In Paris, there was an avant-courier of cholera, namely, a morbid sensibility (" une grande susceptibilité intestinale") of the alimentary canal.

II. " How has this scourge been generated, or how has it got amongst us? Its invasion has been too sudden to account for it by the introduction of a germ, a veritable contagion, passing from the infected to the healthy. Nevertheless, as there is generally more than one person affected in each house —as several people usually take the disease in succession—as the epidemy spreads, as it were, by chance or caprice, through towns and villages, under conditions the most opposite, and under circumstances the most dissimilar—sparing some and scourging others, we are compelled to confess that there is something mysterious and unknown in the mode of its propagation."

III. The predisposing causes were numerous. Among the chief were derangements of the digestive organs—preceding diarrhœa and other affections of the intestinal canal—*fear*, of whose influence M. Broussais cites some curious illustrations. The Neapolitan Ambassador had studied the charts day and night, watching the course and predicting the irruptions of cholera. Among other predictions was one, that he himself would fall an early victim to the contagion of cholera! It may be fairly presumed that in this, as in many other instances, the prophecy fulfilled itself! All excesses, moral as well as physical, predisposed to the epidemic.

M. Broussais considers the disease as varying in its phenomena, according to three different portions of the alimentary canal on which it happens to make its first impression. The first portion extends from the mouth to the termination of the duodenum—the second consists of the small—and the third of the great intestine. The last is most frequently the seat of cholera —the first is least frequently attacked —and still more rarely are all three invaded at the same time. When the colon is affected, there are slight colics and abundant evacuations, by each of which the patient feels relieved; but, after a time, the evacuations change their appearance, becoming white, very thin, flocculent and characteristic of cholera. There is no bile. When the small intestines are first affected, there are borborygmi, distention of the abdomen, and ultimately diarrhœa. When the stomach and duodenum are primarily affected, there is constipation instead of diarrhœa, nausea, vomiting, at first without pain, but afterwards with progressive suffering, cramps in the lower extremities, and a kind of trismus of the lower jaw.

In some cases the disease first attacks the nervous system, and the patient faints, or becomes prostrated in an instant, with vertigo, but with no pain, no gastric or intestinal disturbance. Vomiting or diarrhœa, however, do not fail to succeed sooner or later.

The lining membrane of the alimentary canal has been found more inflamed and disorganized, according to M. Broussais, than we have found it here. The consequence has been, that the celebrated professor of the Val de Grace has pronounced the disease to be highly inflammatory action of the whole alimentary canal—and that it is extremely rapid in its course. If we do not always find the mucous membrane red and injected, he thinks it is owing to the quantity of watery fluid thrown out, by which the membrane becomes blanched.

The treatment pursued by M. Broussais may be easily imagined. Ice was given to the patients almost ad libitum—leeches were applied to the epigastrium—and heat to the extremities. By these means, it is said that he lost about 1 in 6 at the beginning of the epidemic—and only 1 in 40 towards the decline of the same. This, if true, is strongly in favour of the antiphlogistic treatment—for few physicians can boast of such success.

In respect to prophylaxis, the professor recommends a reduction of one-half of our food—the avoidance of all sorts of vegetables and fruits—of all sorts of stimulants, watchings, fatigues, and excesses of every description. He strongly advises people of timid disposition or weak nerves to avoid the sight of choleric patients. There can be little doubt that tens of thousands have become affected with cholera, during the reigning epidemic, through fear. Of all exciting and predisposing causes, this is the most powerful.

LX.

ANTHELMINTIC EMULSION.

TURPENTINE is now regarded as the most certain of our medicines for the expulsion of intestinal worms: it has been exhibited under a great diversity of forms, with a view chiefly to the modification of its nauseousness, or the increase of it specific powers: as combined in the subjoined prescription, it acts with remarkable efficiency.

℞. Infusi Sennæ, f. ʒx.
Syrupi Rhamni, f. ʒj.
Confectionis Scammoniæ, ℈ij.
Copaibæ, ♏xxx.
Olei Terebinthinæ Rectificati, f. ʒvi.

Rité misceantur ut fiat emulsio, quæ horâ matutinâ sumatur.

This is the dose for an *adult*, having no contra-indicative symptoms: the patient should take it in bed, about four or five o'clock in the morning, and afterwards endeavour to sleep. Generally, within four hours, the medicine begins to determine cathartic effects: if these do not then commence, a small teaspoonful of the confection of scammony, or half an ounce of castor oil, will induce alvine evacuations; after each of these, some drops of an essential oil, or of the aromatic spirit of ammonia, or a little brandy in water, will counteract the tendency to squeamishness and exhaustion which the terebinthinate medicines usually produce. In cases where invermination is indicated by general symptoms, though worms have not been discovered in the patient's dejections, this medicine often accomplishes the dislodgment of these reptiles and a removal of the disorder which their presence had occasioned: in all other cases, the results of its administration are invariable and salutary. For the destruction of tæniæ, the emulsion should be exhibited at least four times, at moderate intervals; its repetition, within a fortnight, seldom fails of eradicating the other kinds of parasitic animals by which the alvine canal is infected. The use of this vermifuge, should be accompanied and followed by a course of medication with bitters, iron, and mild resinous aperients with aromatics.

LXI.

PRETERNATURAL LACTATION.*

ARISTOTLE gave immortality to the he-goat of Lemnos, when he affirmed, for the benefit of after-ages, that this generous animal yielded a profusion of milk, from which the goatherd made excellent cheese. Very useful too, in his way, was "the wether which suckled a lamb;" and the history of this phenomenon is a contribution to philosophy,† from the pen of Dr. Doddridge, alike distinguished for his sagacity, and erudition, and piety.

Donati,‡ in his "Marvellous History;" Paullini,* in his second "Century;" and the Bishop of Cork,† relate intances of the lacteous secretion being abundant in men.

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* Communicated by Dr. Kennedy of Ashby-de-la-Zouch, Leicestershire.

† Philosophical Transactions, Vol. XLIV, for 1746-7; Phil. Trans. abridged, Vol IX, p. 557.

‡ Marcello Donati; De Medicâ His-

Cardani‡ enumerates the circumstances of a young woman, who had never been impregnated, whose breasts yielded milk, on their being excited with the stings of nettles.

Dr. Stack,§ and Dr. Montègre,‖ have detailed cases of copious lactation, accidentally re-produced in *aged* women: to these the present writer will add some account of a woman who gave suck to children, from the *twenty-fifth* uninterruptedly to the *seventy-second* year of her age: this person is still alive and accessible to examination.

I. *Dr. Stack's History*. Elizabeth Brian was examined by Dr. S. and another gentleman, at her house in Tottenham-court, in 1733: she was then in the sixty-eighth year of her age; and for more than 20 years she had not given birth to a child. Her breasts were "full, fair, and void of wrinkles; but her face was very much withered, her cheeks and mouth vastly sunk in, her eyes red and running with a clammy humour." Upon pressing her right breast at the Doctor's desire, "she fairly squeezed out milk which gathered in small drops at three of the lactiferous ducts terminating at the nipple." Having himself carefully dried the nipple with his handkerchief, Dr. S. made her repeat the experiment, and it had the same result. About four years previous to this examination, E. B.'s daughter, being obliged to be absent for a considerable time, left a babe she was then suckling, in the care of its grandmother: the old woman "finding the child froward for want of the breast, applied it to her own, barely in order to quiet the infant, without the least thoughts of milk." This having been repeated several times, a son of E. B.'s, now grown a man, perceiving that the young one swallowed something from the nipple, "begged leave of his mother to try if she had not milk: his experiment succeeded, and he drew milk out of the same breast from which he had been weaned above twenty years; for seventeen or eighteen years previously his mother had not given suck to any child. Two years afterwards, E. B.'s daughter had another babe; whereupon its grandmother weaned the first, and commenced suckling the new-born infant. "In my presence," says the Dr., "this infant took the nipple with as much eagerness and seeming delight as I ever perceived in a child of two years old; and at it plainly performed the actions of suction and deglutition: the two children, both girls, are, as to constitution, such as I could wish to the dearest friend; plump, and firm in flesh; in complexion, cleanly, fair, and healthy; and in temper, brisk and sprightly, considering the mean diet of their nurse. When this good woman came to town," the Dr. adds, "which was near two years since, her milk abounded to that degree in both breasts,

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toriâ Mirabili, opus variâ lectione repertum. Lib. VI, Cap. 2. 4to. Venetiis, 1588.

* Chr. Fr. Paullini; Observationum Medico-Physicarum Centuriæ IV. Francoforti, 1706.

† Philosophical Transactions, Vol. XLI, p. 813; for 1739-1741. Phil. Trans, abridged, Vol. IX, Part III, p. 208. Medical Essays and Observations, abridged from the Philosophical Transactions, by S. Mikles, M.D. Vol. II, p. 426, 1745.

‡ Girolamo Cardani; De Rerum Varietate Libri Septendecim, Lib. VIII, Cap. 43. Basileæ, 1557.

§ Thomas Stack, M.D. Philosophical Transactions, Vol. XLI, for 1739-1741, p. 140. Phil. Trans. abridged, Vol. IX, Part III, p. 206. Mikles. Medical Essays, Vol. II, p. 368. In Phil. Trans. Vol. IX, for 1674, p. 100, there is a "Relation of Women of 60 and 66 years of age giving suck to children."

‖ Antoine François Jenin de Montègre, D.M. Gazette de Santé, 1810, of which Journal Dr. M. was Editor, from 1810 to 1818; he died in Hayti, 4th September, 1818; his excellent "Traité Analytique de toutes les Affections Hemorrhoidales," is analyzed in the Medico-Chirurgical Journal, Oct. 1818.

that, to convince the unbelieving, she would frequently spout it above a yard from her: a particular which, among others, the good man and woman of the house, and others of the neighbourhood likewise, assured me of. Now her left breast is run dry, and she has no great quantity in the right; but what there is, is as good milk as one may desire in a nurse. The poor woman seems perfectly honest and artless, and even inclines strongly to dotage: she very religiously throws the whole upon a miracle."

II. *Dr. Montègré's History.* Having collected a number of analogous facts, Dr. M. published them in the 'Gazette de Santé,' in connexion with the following, which came under his own observation. "La Femme Charles," a delicate female, had male twins in 1810, but from the great weakness of her constitution, she could hardly supply one of them with milk; and, in consequence of extreme poverty, was unable to procure the services of a nurse. Affected by this discouraging embarrassment, says Dr. M., her mother took one of the infants and put it to her own breast, which the babe instantly seized and began to suck. This ingenious grandmother was then in the sixty-fifth year of her age, and had been twenty-nine years a widow. At first her breasts yielded a fluid, in small quantity; but in a few days, her infantine grandchild drew from them an abundance of healthy milk. This tender nurseling continued for two and twenty months to be nourished at its grandmother's breasts; and throughout all that period was more vigorous than its brother who imbibed his sustenance from their common parent.

III. *Dr. K.'s History.* Judith Waterford lives in the village of Thringston, on the Forest, between Ashby-de-la-Zouch and Loughborough, Leicestershire. At this time (*December*, 1831), she is in her eighty-first year, and though infirm, her constitution has singularly retarded the advances of old-age.

Through life, this woman has been the active and laborious inmate of a peasant's cottage; her person is short and well-proportioned: at one time she weighed about 14 stone: her temperament is the neuro-sanguineous, distinctly marked. The peculiar circumstances of her history being extensively known in the district where she resides, she has been visited by many clerical, medical, and other curious inquirers.

J. W. had two husbands. Previously to her first marriage, her menstrual secretion appeared at regular periods: it continued nine days usually, and was very profuse, but preceded and accompanied with little pain or disturbance of the system. After this went, it returned only nine times, at distant and irregular intervals; and on each of these occasions it was abundant, without causing any perceptible diminution of her milk.

J. W. was first married in 1777; her first child was born in May 1778; and from that period till May, 1825, her lacteous secretion never in the least subsided. Besides giving her breast freely and frequently to the young ones of her neighbours, she suckled six children of her own by her first husband, and eight nurselings: she had two miscarriages. Her first confinement was followed by an excessive uterine discharge, which continued three weeks and induced considerable debility. No infant, however vigorous, was ever nearly able to use her supply of milk; and, in consequence, she often had her "breasts drawn" to the amount of two quarts in a day: her belief is, that, in general, she could have suckled four lively children, at the same time. Many attempts were made, even under medical direction, to suspend the secretion of her milk; but they all utterly failed. Her breasts often became tense and painful; and, for the removal of this state, she had them well rubbed with butter made from the cream of her own milk; this process was invariably advantageous. Sometimes about a pint of this cream was collected, and the butter it yielded was white, and soft as lard, with a sweet taste. Judy took much food, and seldom had recourse to medicine; it is her boast, indeed, that "she never paid a shilling in her life for doctoring, for the sake of her health;" her bowels generally were torpid, often constipated.

J. W. was a widow nearly three years, and gave suck to her own and other children during the whole of that period. She had one still-born child to her second husband. Her breasts even now retain a size quite extraordinary, and the axillary glands are occasionally large. Soon after the disappearance of her milk, in 1825, her health became more variable, her energies gradually failed, and her voice, which still is strong, lost its natural strength. Her actual powers of mind seem to have experienced little change; she continues "heart-whole;" her appetite is considerably impaired; she wishes to eat often, but takes little food at one time; her sleep is disturbed and unrefreshing, and a cough gives her occasional annoyance; her pulse is full, soft, not quick, and resistant. For many months, she has been slightly troubled with those periodical disturbances by which menstruation is preceded.

Although Judy's milk ceased, for a time, in 1825, it repeatedly appeared in minute quantities during the five subsequent years; but, since the Autumn of 1830, the secretion of this fluid has been constant, and, if encouraged (she thinks), would be sufficient to nourish a child; from attempting this, however, she is deterred by the idea, that "it would soon be the end of her."

December 6th, 1831. This day, being in the middle of her 81st year, Judy readily filled a small spoon with her milk, by squeezing her left breast frequently with the hand. This milk was rich and sweet, and not different from that yielded by young and healthy mothers.

Here, then, are the remarkable circumstances of a woman who menstruated during lactation—who suckled children uninterruptedly through the full course of forty-seven years—and who, in her eighty-first year, has a moderate but regular secretion of milk.

LXII.

ANEURISM, FROM WOUND OF THE BRACHIAL ARTERY IN VENÆSECTION.*

"FOUR forms of aneurism may arise in the bend of the arm from a wound of the brachial artery (sometimes the radial) in venæsection, aneurismal varix, varicose aneurism, diffused and circumscribed false aneurism. Respecting the treatment of the two last, considerable difference of opinion exists among practical surgeons, some contend that both require operation, whilst others maintain their curability by compression.

The advocates for the operation have not as yet decided upon the precise situation where the vessel should be secured, nor upon the mode of securing it, some apply a ligature upon the vessel above the aneurism, and depend upon the absorbents for the removal of the tumour, whilst others open the aneurism and tie the artery above and below the wound.

The supporters of the mode by compression have not agreed either upon the place where the compressing force should be applied, nor upon its degree; some direct violent pressure to be made upon the vessel above the aneurism to obliterate its canal, whilst others are content to apply very slight pressure to the tumour itself.

In the midst of such conflicting opinions, we must appeal to facts, before we can arrive at any thing like a satisfactory conclusion."

CASE 1. — *Circumscribed Traumatic Aneurism—Cure by Compression.*

John Miley, æt. 27, applied at Stevens' Hospital on the 11th October, 1828, with circumscribed aneurism of the brachial artery in the bend of the arm. The tumour was firm, pulsatory, about the size and shape of a pigeon's egg, apparently intimately connected with the artery. It was diminished by pressure, and regained its size on its removal. The radial pulse was weaker on that side than on the other. The integuments presented a small cicatrix.

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* Dublin Journal, No. II.

The patient had been bled *by a blacksmith* thirteen days previously. The patient observed "the beating tumour" on the removal of the bandage several days afterwards. The case appeared a fair one for the employment of compression.

"The patient was immediately confined to bed, the limb placed upon a pillow, some cathartic mixture prescribed, and sixteen ounces of blood abstracted from the opposite arm.

The next day, a thin compress of wetted lint was laid upon the aneurism, and a roller bandage applied from the fingers to the bend of the arm, in the manner recommended by Genga, care being taken that the compression should not extend above the aneurism, the turns of the bandage over the aneurism were very loosely applied. The patient was desired to keep the compress constantly moistened with cold water, and to take a draught containing two drops of tincture of digitalis every sixth hour. Two days subsequently, the bandage was opened and re-applied, the draught was continued, and he had sixteen ozs. of blood taken from the opposite limb.

On the 7th day, the aneurism felt more solid, and did not diminish so sensibly when compressed. The bandage was re-applied, and a compress of sponge substituted for the lint. The digitalis continued, and other treatment as before.

On the 12th day, the aneurism appeared sensibly diminished, and much more solid; the pulsation in it was less distinct, whilst that at the wrist appeared more full. Bandage continued; the turns which passed over the compress being applied more firmly than before. Pulse 66. Patient is in perfect health, but complains much of the strict antiphlogistic regimen which he is compelled to observe. He was ordered to take a draught, containing thirty drops of tincture of digitalis, every second hour.

In the evening his pulse was down to 38. He did not complain of nausea or giddiness. The draughts were discontinued.

On the 14th day, the digitalis was administered in doses of twenty drops every sixth hour.

On the 20th day, the tumour was not larger than a marble, perfectly hard and without pulsation. The radial pulse beat firmly, and nearly as full as on the opposite limb. The bandage was re-applied, the compressing force being increased. Digitalis omitted. Antiphlogistic treatment still persevered in.

On the 30th day, there was no trace of the aneurism; the brachial artery could be felt pulsating strongly beneath the cicatrix in the integument, and the radial pulse appeared as full as that of the opposite limb.

On examining the patient eighteen months subsequent to his dismissal from the Hospital, no trace of the aneurism could be detected, the artery pulsated beneath the cicatrix strongly; the pulse at the wrist felt perfectly natural, and he stated, that he had not suffered the slightest inconvenience from the arm, in pursuing his very laborious occupation."

Case 2.—*Circumscribed Aneurism—Compression—Cure.*

Terence M'Evoy, æt. 25, was admitted into Dr. Stevens' Hospital March 2d, 1829, with circumscribed aneurism at the bend of the arm. The tumor was distinctly circumscribed, fully as large as a turkey's egg, pulsating, uniformly elastic, except at its anterior part, where it felt soft and pulsated most strongly. Pressure on the brachial artery stopped its pulsation but did not diminish its size. An artery of considerable magnitude ran over its anterior surface, but did not seem to be connected with it. The integuments were healthy; an old cicatrix was observable on the centre of the swelling. Nine months previously he had been bled, and, on removing the bandages three days afterwards, he noticed a small pulsating tumour. The treatment so nearly resembles that adopted in the preceding case, that we need not stop to particularize its items. On the 50th day there was no trace of the aneurism, the artery which had been wounded could be felt pulsating strongly beneath the cicatrix at the bend of the arm, and the vessel which ran across the tumour (the radial) appeared perfectly natural.

CASE 3.—*Circumscribed Aneurism—Compression—Aneurism rendered diffused—Operation—Cure.*

John Byrne, æt. 35, admitted Feb. 25th, 1830, with circumscribed aneurism of the brachial artery, produced by wound of the vessel in venesection five weeks previously. The tumour was oval, as large as an orange, adhering intimately to the brachial artery, solid at the base, soft and elastic in the centre. On compression of the brachial artery the tumour lost its pulsation, and became softer.

The same treatment was adopted as in the former cases, and, on the eighth day, the tumour appeared more solid. The pressure was re-applied with more firmness. He passed a restless night, and on the following morning complained of great pain in the tumour and arm. The aneurism was found to be no longer circumscribed, but to extend along the inner edge of the biceps muscle, towards the axilla, for several inches. The whole swelling, particularly the upper part, was soft and fluctuating; the pulsation throughout not very distinct; in short, it was now a case of diffused aneurism. In consultation, it was determined to treat it as a wounded artery. The tumour was fairly opened into, the coagula turned out, the artery tied above and below the wound in it. The ligatures were thrown off on the twelfth day, and, on the 30th, he left the hospital, quite well.

“ It is manifest, from the foregoing cases, that the form of aneurism to which pressure is most applicable, and in which it is most likely to effect a cure, is that of circumscribed false aneurism, unattended by inflammation either of the sac or surrounding parts.

It is equally obvious, that the pressure should be applied to the tumour alone, and not to the artery above, and that the degree of pressure be slight until the diminished pulsation and solidity of the tumour indicate that coagula fill the sac, otherwise the aneurism will become diffused, as took place in the third case.

It is probable, if not certain, that the opinion hitherto entertained respecting the obliteration of the artery at the part wounded, is, in the majority of cases, erroneous and without foundation. The pulsation beneath the cicatrix remained strong and natural, after the absorption of the tumour in both cases, and in a case of circumscribed false aneurism in the bend of the arm from bleeding, which Mr. Wilmot cured by pressure several years ago, in Jervis-street Hospital, the artery continues to pulsate strongly beneath the cicatrix to this day.

The utility of combining Valsalva's mode of treating internal aneurisms with gentle pressure on the tumour itself, was well exemplified in these cases.”

LXIII.

ABSCESS OF THE LIVER—PUNCTURE—DEATH.

JOHN EVANS, æt. 23, a sailor, admitted Jan. 5, under Dr. Elliotson, with a great but circumscribed tumefaction over the hepatic region, extending to the umbilical, with fluctuation at its lower part. The pulse was full and irregular. He had been for five years engaged in a voyage to and from the West Indies, and for the last five had been trading between London and Bourdeaux. He had been ill for 12 months, and attributed his complaint to exposure to cold and inclement weather. He was first attacked with bilious vomiting, and acute pain in the right hypochondriac region, the whole surface becoming of a saffron hue.

Hirud. xx. *regi. hepatis*—*cal.* gr. v. *o. n., ol. ric. o. m.*

“ 6th. Continues the same.

“ A linseed meal poultice ordered to be applied to the abdomen, and six grains of calomel to be given every night: to be kept on milk diet.

11th. Complains of very acute pain over the region of the liver.

Twelve leeches were ordered to be applied immediately to the part affected, *and one grain of opium to be taken; five grains of calomel to be continued twice a day.*

14th. Appears somewhat easier, but still complains of great pain over the abdomen, very much increased by pressure. The same medicines to be continued.

16th. Continues the same. *Ordered six grains of calomel, to be taken three times a day.*

20th. The patient's health is a little improved, and there is an evident fluctuation over the tumefied region of the liver. A puncture was made by Mr. Green, at the lower part of the umbilical region, from which four quarts of a thin and highly fetid purulent matter escaped. Since the operation the patient has been much easier, and can lie down without pain.

24th. Complains of great weakness, the pulse rather full, soft, and easily compressed.—*Ordered arrow-root and two pints of milk daily.*

There has been a discharge of hydatids from the puncture.

29th. Appears to be gradually sinking: still complaining of great pain on pressure over the whole abdomen. *Ordered three grains of opium to be taken immediately, and half a pint of wine, daily.* If the pain should increase, the wine to be diminished.

28th, Being very urgent in his request to leave the Hospital, his wife removed him.

He died on Monday, the day after his removal, at 2 p. m.

Post Mortem Examination.

Strong adhesions of the liver to the surrounding viscera; the liver considerably enlarged, especially the left lobe, which was full of small collections of fœtid pus, and the surface of a dark colour, the right lobe almost entirely degenerated into a large abscess filled with numerous hydatids, its proper substance forming a large and thin cyst. The gall bladder empty.

The other viscera were not examined.

Dr. Elliotson remarked that this case closely resembled one described in Dr. Baillie's Morbid Anatomy."

LXIV.

DR. M'CORMAC ON THE OIL CALLED PALM OIL.

WE extract the following short notice on this oil from our Glasgow contemporary for May of the present year.

"The palm oil of commerce, is obtained from the Cocos butyracea, which we are told is a native of Brazil. Now we find that the greater part if not the whole of the palm oil in use, comes from the coast of Africa, by way of Liverpool and London. Then the cocos butyracea is either a native of Africa, which I take to be the case, or otherwise, the officinal palm oil of the Edinburgh pharmacopœia is procured from the African palm. This I know to be the case, from having seen the plant and its oil upon the spot, up the river Sierra Leone.

It is stated in our dispensaries, that the palm oil tree furnishes a yellow succulent fruit, with a fibrous pulp, containing a hard cartilaginous kernel, which last, by grinding and maceration, furnishes the oil. I shall now state the real process by which it is prepared, from which it will be seen that an error must have crept into our accounts on the subject.

The palm tree growing on the coast of Africa, furnishes at the base or origin of its leaves, clusters of a yellow succulent fruit. Each of these bears some resemblance to a grape shot. The bunches are of different sizes, and the fruit composing them of different shapes, as might be expected from their reciprocal pressure, although naturally round, when not exposed to it. The pulp of this fruit is soft, and of a bright yellow colour—it is from this that the oil is obtained. Within it lies enclosed a hard and thick-shelled stone, of a dark colour, within which is contained a firm white kernel of a pleasant oily flavour. This kernel also affords an oil, which is not yellow, but white—and not fluid but concrete even in Africa. I need hardly say that the yellow palm oil is quite fluid while in Africa, and that it is not until it has been exposed to the cold of our temperate regions, that it becomes solid—whereas the oil of the kernel, as I have said, is always concrete or nearly so.

Both the white and the yellow oil are obtained by expression. The latter is procured in immense quantities in Africa, where it is partly consumed by the negroes along with their rice and pepper, or fried with their fish; and partly exported to Europe, where its principal use is in the manufacture of soap.

It continues to possess a pleasant fragrant odour for a long time after its extraction, and holds the same importance among the necessaries of an African, that olive oil does, among those of an Italian or Spaniard. It affords an amusing spectacle to a new comer to witness a number of merry negroes squatting on their hams round a calibash of rice. They seldom use a spoon, but knead the grain into huge balls, which they roll over in a mixture of pepper, salt and oil, and then pitch them with unerring aim and surprising velocity into their mouths, whence they almost seem to descend unbroken into the stomach. The white oil is only used as an ointment for the skin, which it keeps nice and soft, while it at the same time prevents too great an excretion of perspiratory matter. Not content with the hue that nature had given them, I have sometimes seen fond mothers mix this oil with something like lampblack and rub their children over from head to foot, giving them a singularly lustrous appearance especially in the sun.

The palm tree is one of the most stately in the African forest, towering above the rest, as the lofty pine does at home over its fellow trees. Parrots are said to be fond of the fruit. I have seen it given to them after they were newly caught. Indeed the strong arched beak of this bird, seems to render it peculiarly fit for tearing the fibres of fruit asunder. The preceding statement affords but a trifling addition to our knowledge, but as every thing helps to swell the great mass, I may be permitted to bring it forward."

The brothers Lander in their amusing and not uninstructive Journal of their adventures in Africa, whilst in quest of the course and termination of the Niger, make several remarks on the great consumption of palm oil by the natives. Wherever they were hospitably received by the dusky chief of an African town, and chiefs and towns seem plenty as blackberries in that region of the sun, palm wine and rice or other native dainties swimming in palm oil, were usual and acceptable presents. The God of the white man and the black has neither forgotten nor forsaken his dark children. The palm tree is a gift above all price to the African. It furnishes him with a pleasant drink, which he may ferment, a valuable oil, a fruit from the nut, and materials to construct his hut and his canoe; it gives him, in fact, food, drink, shelter, and conveyance. "The juice which is called wine, is obtained by making a hole in the trunk of a tree, and inserting a piece of the leaf into it so as to form a spout; the liquid flows through this and is received into a calabash placed beneath it, which probably holds two or three gallons, and will be thus filled in the course of a day. It shortly assumes a milky appearance, and is either used in this state, or preserved till it acquires a rather bitter flavour."* It is curious that man in all situations, and, so far as we know, in all ages, has continued to procure an intoxicating beverage. The Scythian and Sarmatian, in lands where immense plains were broken only by lakes and forests equally immense, where cultivation was never even attempted, and the nomade tribes lived like the modern gipsies in waggons, and wandered over their wide tracts from their youth to their age, still contrived to convert the milk of their mares into a stimulating drink. We are told by the Landers that in the interior of Africa palm wine is drunk to excess, and parties are formed to partake of the fascinating liquid. Nay, in one place an epicurean community exists, the elders repairing at morn to the shade of a majestic tree, and sitting till night with their calabashes by their side, draining draughts which they would not barter for the mead in the halls of Valhalla, discoursing of by-gone times, and quietly awaiting death with only the palm between them and the sky where their Pagan heaven is, and the mighty juice of the noble tree beside them.

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* Lander.

LXV.

CASE OF SECONDARY HÆMORRHAGE IN WHICH THE EXTERNAL ILIAC, INGUINAL, AND FEMORAL ARTERIES WERE TIED. WITH CLINICAL REMARKS.

By M. S. BUCHANAN, M.D.

THERE are few subjects in surgery on which the accumulation of authentic facts is more likely to throw light, or, indeed, on which light is more required, than that of secondary hæmorrhage. Not that we are deficient in valuable and certain information respecting it, but we want to go farther than we have gone, to advance our outposts, to gain possession of points which shall give some clearness to what is now obscure, some certainty to what is now uncertain. Where is the surgeon who has not been surprised with the occurrence of secondary hæmorrhage when he did not look for it, who has not seen it prove fatal without apparent adequate cause why it should continue, who has not seen it cease as suddenly as it appeared, and prove but a bugbear when it promised to be a formidable foe! In point of fact we do not understand the laws which govern it, the circumstances necessary to its occurrence or its cessation—if those laws are certain we do not know them, and if they are uncertain we do not know the amount of uncertainty. It is on this account that we notice the following case, and that we usually make it a point to republish in this Journal such instances of secondary hæmorrhage as are related in other Journals, and seem to be deserving of attention.

Case. A boy, 12 years old, fell on the 15th January from a railway waggon, the wheels of which pushed his body onwards before it to the centre of the track. A dreadful contusion of the upper part of the thighs and lower part of the belly was the consequence, the skin and subjacent tissues were killed, they sloughed, and on the tenth day after the injury the sloughs had separated. On admission into the Glasgow Hospital on the 25th, the whole of the right and left inguinal and iliac regions, with the hypogastric from the root of the penis to within a few lines of the umbilicus, was one mass of ulceration of a healthy florid appearance, and covered with thick benign pus. At one spot in the left groin, where the ulcerative process had dipped deeper than elsewhere, the granulations were flabby, of dark grey appearance, and in a state approaching to gangrene. His health was much impaired—he was much emaciated—pulse 140, weak—thirst urgent—countenance anxious—troublesome dry cough—hectic. Besides all this, there were bed sores and extensive bruising on the sacrum and dorsum of the ilium. He was put on generous diet, the wound was dressed with carded cotton, and he continued daily to improve.

"Early in the morning of the 2d February, (being eighteen days from the accident,) hæmorrhage to an alarm-extent took place during sleep, and before he awoke, and compression was applied, he had lost upwards of ℥xxx. of blood. Syncope then took place and a coagulum formed, which stopped further effusion. The bleeding was remarked to have occurred exactly over the femoral artery, which was felt distinctly pulsating under where clot had formed, and in the soft friable and sloughy spot mentioned in first part of case.

Ten hours after the hæmorrhage, the report in the Journal bears, that he had again revived by the application of warmth to his extremities, and mulled wine at intervals, which he swallowed greedily. His moaning, however, had returned, and his cough had again become very troublesome.

You will find by a reference to the minute reports of the 3d, 4th, and 5th, that his strength continued rapidly to improve, his restlessness, moaning, and short cough gradually disappeared, and his appetite became so keen that he entreated to be allowed full diet, which was in part complied with.

About 11 o'clock in the evening of the 5th, arterial hæmorrhage again appeared from seat of femoral artery; a consultation was instantly called, and compression with the finger had recourse to. On my arrival at the Hospital, I made a minute examination of the wound, and observed the arterial stream to issue from a small aneurismal pouch about the size of a field bean, in the centre of the soft flabby ulcerated surface of the left groin, and which with my finger I freely opened, but to my astonishment hæmorrhage again ceased completely. By this time the members of consultation had arrived, but, in consequence of the extreme exhaustion produced by the hæmorrhage, they were of opinion that compression with the finger over the site of the above-mentioned pouch, should be again had recourse to, after which, if the boy revived, and hæmorrhage recurred, from what was by the minority thought the femoral artery, then the external iliac should be secured by ligature.

The quantity of blood by this hæmorrhage having amounted to about ℔i., the extremities being cold, and the face of the little sufferer of a deadly pallid hue, with a fluttering and compressible pulse, I ordered him wine, *ad libitum*, and to be strictly watched, requesting the gentlemen of the consultion again to give me their assistance at the visit hour, 1 o'clock, P.M. I ought to have stated, that the majority in consultation thought that it could not be the main trunk of the femoral which was ulcerated, but the epigastric, and if so, that tying the iliac would be of no use, from the free inosculation of the former with the external mammary, and the great risk besides of mortification of the limb, from the above operation, in such a subject. To the first part of this position, I felt inclined to subscribe on a former occasion, and for the reasons then urged; but on the present, my mind was made up as to the source of the hæmorrhage, and the consequent practice. I felt somewhat at a loss, however, to account for this bell-shaped pouch over the main trunk of the femoral, the ease with which the stream was arrested, and the length of time which had intervened since the previous flow. The only way in which I could explain this peculiarity in the case was, that Nature in her effort to save life had, when the first hæmorrhage was arrested, spontaneously formed, between the coats of the vessel and the sheath, a layer of lymph,—that this becoming organized, constituted the bag alluded to, which being distended and ulcerating had burst, and after the application of the finger, that Nature again was in the act of renewing her former manœuvre, to the astonishment of all her spectators.

At 1 P.M., of the 6th, matters had much improved, and you will find by the very accurate, though lengthy report in the Journal of this date, after stating all the particulars of the case, that 'no further hæmorrhage had occurred.' The majority of the consultation were therefore of opinion, that nature should get, once more, a trial of her powers at plugging, prior to the dernier resort—the ligature of the artery. But I must say, that at this consultation there was a considerable difference of opinion, and I state this here, that all of you may know the facts of the case, and the arguments which were used, *pro* and *con.* as in my opinion, a knowledge of this consultation is of essential importance to the right understanding of all that afterwards occurred. In page 237 of Vol. III. of this Journal, in relating my case of ligature of the subclavian artery, you will find a *facsimile* of the case now under consideration; and the arguments there brought forward by the minority, were exactly of a similar kind to those advanced in the present case; namely, that hæmorrhage would undoubtedly again occur, and put it out of our power to proceed to an operation; and that the patient would never again have an equally good chance of surviving, nor an operation of being successful, as at the present moment."

In the evening of the 6th he was much revived, although he had taken nothing but wine. This was continued, and 15 drops of tincture of digitalis ordered to be given every fifth hour. Lunar caustic was applied to the flabby granulations round the hæmorrhagic spot, and cotton applied to the ulcerated surface. The patient improved, and, with the exception of another hæmorrhagic drain on the 24th, nothing untoward occurred till the 26th; the patient in fact appeared convalescent.

"I must here crave your attention to a few passing remarks on the history of this case, since the 14th, the date of last bleeding. I mentioned that at the consultation of the 5th, a kind of qualified permission was by the majority given, to throw a ligature round the external iliac artery, if hæmorrhage again occurred from the same spot. The qualification was, if the bleeding was distinctly observed to proceed from the trunk of the femoral artery. I need not inform any of you, how much opinions on this point changed, from the 5th to the 14th, or in other words, how eight days of calm and convalescence strengthened the impression, that such a formidable operation was quite unnecessary, and also the opinion that a small arterial branch only had given way, which time and perhaps compression would cicatrize. For this reason I did not proceed to the operation on the 14th, though much inclined, but rather preferred the sanction of another consultation to abiding by my own conviction, and notwithstanding the result of the consultation, as reported on the 15th, I still had the satisfaction of having done my duty. It may be said, that timidity rather than caution prompted me on this occasion, and I am free to confess that I had fearful forebodings of the result, for the reasons which shall hereafter be detailed; but a paramount feeling of duty to my patient, absorbed at this stage of the case, every other consideration. After the consultation of the 15th, however, I as it were resigned the case into other hands, and from this period ceased to look upon it as of the same interest, for I felt that no sooner had I made up my lee-way by the exhibition of tonics and stimulants, than all must again be lost by another and a more fatal hæmorrhage. True it was, I could not positively affirm that it was the femoral artery, in consequence of the soft, friable and sloughy state of the wound—true it was, I could not very satisfactorily, or according to any of the known rules of surgical pathology, explain the meaning of such long intervals of hæmorrhagic repose, or the process by which, so frequently, nature in this remarkable case, formed for herself a plug, in so large an arterial conduit; still, I was not singular in this opinion, founded as it was on the observation of nature's resources in aneurismal cases, and as the result will show you, I had the misfortune to be right—but you observe, with what difficulties I had to grapple, and against what odds I had at every step to contend. The application of lunar caustic, and the finger to the soft flabby granulations, over the hæmorrhagic spot, were resorted to, merely to assist in forming a coating of lymph, and prolonging the interval of repose, and from the success which had previously attended these efforts, I meant, (but for the event which I am by and by to detail,) to have continued them for some time longer."

On the 26th these favourable appearances were at once destroyed by another bleeding. At 3 a.m. arterial hæmorrhage again occurred from the sloughy spot already mentioned, but was immediately commanded by the finger, and not above ℥ii. of blood were lost. A consultation was called at 6, a.m. when, compression having been removed that the wound might be examined, the arterial gush instantly took place, apparently from the femoral artery, exactly over the spot whence all previous hæmorrhage had issued, but it was at once arrested by the finger. The vessel and sheath seemed to be in a soft friable state. The pulse was firm, and he was not depressed.

"The consultation, which consisted of Drs. M'Farlane, Weir, and Auchincloss, being unanimously of opinion that the external iliac artery should, without further delay, be secured by ligature, the operation was performed in the following manner:—I made an incision from outer opening of inguinal canal, to about half an inch from anterior superior spine of ilium, about an inch above Poupart's ligament. The first incision was straight and carried through skin and cellular substance. The superficial fascia covering external oblique muscle, was then divided upon the director through whole extent of wound, and the fibres of external and internal oblique were thereafter incised in a similar manner, exposing fascia transversalis and peritoneum. I now introduced my finger into wound, and with my nail detached with ease the peritoneum from sheath of external iliac artery, to the extent of about three-fourths of an inch, and having now passed the common aneurismal needle under it, from within outwards, armed with a single silk ligature, I secured the vessel by a double knot, carrying the ends on the points of my fore-fingers to the bottom of the wound, which was nearly an inch in depth. Pulsation and hæmorrhage were instantly arrested, and one end of ligature being allowed to remain, lips of wound were approximated by a stitch in centre, and adhesive plaster. He bore the operation well, and though it lasted about twenty minutes, not two ounces of blood were lost."

Into Dr. Buchanan's reasons for modifying the operation in the manner in which the well-informed reader will perceive that he did, we need not enter. Until March 1, when pulsation was first perceptible both in the femoral and popliteal arteries, nothing of any moment occurred. The patient was moderately supported. At 7 o'clock of the morning of the 2d, hæmorrhage again occurred from the same spot as before. Only one ounce of blood was lost, the little patient making immediate pressure himself. Till the visit hour at half-past one o'clock compression was steadily maintained.

"When visited about half-past one o'clock, it was evident that collateral circulation had become completely re-established, directly through femoral artery upwards to inguinal, from the gush of arterial blood which had taken place at two different periods since 7 o'clock, on attempting to remove the finger from the hæmorrhagic spot; and also from suppression of bleeding and pulsation, by compression of femoral artery, on the distal side of place whence blood issued. On this account, with the concurrence of my colleague, I proceeded to throw a ligature around the femoral artery at the place, where compression arrested the reflux channel. For this purpose, the patient was placed in the same position as in the operation of the 26th, the finger of my assistant during the performance of the operation being kept firmly applied over bleeding spot. I then made an incision about 1½ inches in length, in a slanting direction, from border of fascia lata, towards inner side of sartorious muscle through skin and cellular substance. Femoral fascia was now incised in centre of wound, a director being introduced, first upwards, then downwards, and the membrane divided upon it with a scalpel. Cellular substance between this last and fascia propria was now cautiously cut, the artery separated from the vein, isolated to about one-fourth of an inch, an aneurismal needle armed with a single silk ligature passed under it and tied, one end being cut away close to vessel, and lips of wound approximated by straps of adhesive plaster. The operation occupied about ten minutes, and was almost bloodless. Trusting to the report of the young gentleman who made compression with the finger over the bleeding spot, I tightened the ligature, and secured the femoral at the spot above-mentioned, but most unfortunately, on attempting to remove the finger of the assistant, the gush of arterial blood was as copious and furious as before. The application of the actual cautery, button forceps, and pelvis tourniquet were now thought of, but as soon abandoned. Compression having been applied between the ligature, around femoral artery, and bleeding spot, it was found, that both pulsation and hæmorrhage were by this means instantly arrested, though there were not seemingly above two inches between the above situations, and more than the half of this intervening and interesting part of the arterial conduit, was covered with soft blue flabby ulceration. For the above reasons I determined, with the assistance and concurrence of my colleague, to take up the inguinal artery as near the spot where hæmorrhage had appeared as possible, without running the risk of intermeddling with the soft and diseased part of the tube. For this purpose I made an incision from superior termination of former one, upwards through cicatrix of ulceration, and by this means exposed falx of fascia lata, I now introduced my director under this last and Poupart's ligament, and with my bistoury incised both upwards to the necessary extent; my finger now easily traced inguinal artery to within about half an inch of bleeding spot, and finding it, as I thought, in a sound state, proceeded to isolate it from the vein and anterior crural nerve, and with ease passed the aneurismal needle, armed as before with a single silk thread, on tightening which, pulsation and hæmorrhage were instantly arrested. In this last operation, which did not occupy more than two minutes, as little blood was lost as in the former one, and the after dressing was conducted in the same manner.

It was remarked by the little patient that not only during last night, but on every previous occasion immediately preceding the hæmorrhages, he had a *presentiment* of what would occur, both from a peculiar restlessness, and also from being annoyed with unpleasant dreams."

During the night, the patient was restless and incoherent. On the 3rd, no pulsation could yet be detected in the femoral or popliteal artery—the left limb was colder than natural—pulse 144 and weak. He took wine and water. On the 4th the pulse was 144, jarring and hæmorrhagic. During the preceding night, he had had a rigor of about a quarter of an hour's duration, a certain harbinger of death. In the night of the 4th he had another rigor, and in the afternoon of the 5th another. On the 6th, pulsation had returned to the popliteal artery. His strength now gradually gave way; there was profuse discharge from an abscess on the dorsum of the ilium, and a sore upon the sacrum, and yet, under quina and support, he again plucked up. The femoral and abdominal wounds produced by the operations rapidly cicatrized. On the 12th (10th day), the ligatures were detached from the inguinal and femoral arteries. On the 13th he began to be affected with dry tickling cough and uneasiness of chest, the pulse was 140, abdomen somewhat tense. In the following evening he vomited his wine and arrow-root, sank rapidly, and died in the afternoon of the 15th.

"*Post-mortem Appearances.*—Contents of cranium, thorax and abdomen, having been examined, were found perfectly natural. A wax injection was thrown into left common iliac artery downwards, and into popliteal artery upwards. Abdominal viscera having been entirely removed, peritoneum lining the abdominal parietes was found to be in every part entire, and on sliting it open, from bifurcation of common iliac to left groin, over course of external iliac artery, this vessel was found injected only about two inches in its progress, the remainder of the artery downwards having degenerated into a soft substance, still attached to psoas muscle. The superior portion so far as it allowed the injection to pass, was very much reduced in caliber, not being larger than a crow-quill. The internal iliac was about the size of the little finger, and its gluteal branch was traced through the ischiatic notch filled with injection, and anastomosing freely with the external circumflex, which in this case went on from the profunda; external iliac, from spot where ligature had been applied downwards to seat of hæmorrhage, was completely obliterated, and epigastric artery, which went off about an inch below the tied portion, was so small as to be with difficulty traced. Injection had passed freely upwards, from popliteal artery to within half an inch below the place where lower ligature was applied round femoral; here adhesion of the coats was complete. On tracing the remains of femoral artery, from situation of third ligature, upwards to seat of hæmorrhage, the tube was found in the same state as inferior portion of external iliac, mentioned above. The pouch, which was remarked at the second hæmorrhage, was now well seen, and found to consist of the sheath of main trunk of inguinal artery, and when its soft friable walls were removed, an opening about the size of the point of the little finger was observed at the outer side of main stem, the whole circumference of which, and also the caliber of the vessel, for the space of more than half an inch, partook of the same morbid appearance as the above portion of the arterial sheath. Profunda could only be traced from below to within half an inch of spot where third ligature was applied; here it was confounded in the general disorganization of parts. On dorsum of left ilium, extending laterally from anterior superior spinous process to sacrum, and inferiorly to tuberosity of ischium, was an extensive abscess, excavated into irregular hollows, occupying the whole external surface of left os innominatum. To this abscess there were many openings, the largest of which was situated on the dorsum of left ilium, immediately behind anterior spinous process. On right haunch were two irregular sloughy spots, and on anterior surface of left there were similar marks of disease."

Thus was this long but interesting case concluded. Without entering into any speculations, or indulging in any criticisms, we cannot but regret that the operation was not earlier performed. We do not clearly understand, from the description of the state of the parts after death, whether the profunda joined the superficial femoral between the second and third ligatures, or above the latter. If it did not unite itself to the femoral between the ligatures, or if no other branch of any size arose in that spot, we are left in the dark as to the cause of the hæmorrhage after the application of the second ligature, and its cessation after that of the third. If it did join the femoral in this situation, another reflection naturally presents itself. When a surgeon is aware of a large artery, like the profunda, taking its rise from the inguinal, he should surely refrain from placing a ligature on the femoral below that origin, in order to arrest hæmorrhage from the artery above. The blood getting back through the profunda into the inguinal, is not arrested in its retrograde course by such an operation. It is no excuse to assert, that ulceration in the groin renders it dangerous to tie the vessel where its tunics are probably unsound. Under such circumstances, it is absolutely necessary to tie the vessel as near the source of the hæmorrhage, as a healthy condition of its coats can possibly permit.

LXVI.

ON THE USE OF THE NITRATE OF IRON IN DIARRHŒA. By Mr. W. KERR, of Paisley. Ed. Journal, January, and Glasgow Journal, April, 1832.

THE medicine here recommended is a solution of iron wire, or small pieces of iron, in nitric acid, so as to form a per-sesquinitrate. This, in moderate doses, has been found very efficacious in diarrhœa, and some other affections of the mucous membrane of the alimentary canal. In our Glasgow contemporary for April, Mr. K. has published some more cases, illustrating the efficacy of the medicine in the premonitory diarrhœa of cholera.

LXVII.

A PRACTICAL TREATISE ON UTERINE HÆMORRHAGE, IN CONNEXION WITH PREGNANCY AND PARTURITION. By JOHN T. INGLEBY, Member of the Royal College of Surgeons in London, one of the Surgeons to the General Dispensary, Surgeon to the Magdalen Asylum, and Lecturer on Midwifery at the School of Medicine in Birmingham. One Plate, 8vo. pp. 276. London, 1832.

THAT the art of midwifery, on the scientific and successful practice of which the lives of the most interesting portion of our species often depend, should have received no legal protection, and been controlled by no authorized regulations in Great Britain, a country so pre-eminently distinguished for humanity, appears almost incredible. The commercial spirit which pervades every part of the empire, and appreciates every pursuit in proportion to the pecuniary advantages it may afford, seems to have penetrated into the sanctuaries of physical science. Hence our great chartered bodies, having relinquished this branch of the profession, and being no longer competent to ascertain the qualifications of candidates, the most ignorant adventurers are permitted to abuse the public confidence, and endanger the lives of His Majesty's subjects, without incurring any fine or penalty. To this neglect and degradation of the obstetrical art, we may trace the constant occurrence of disgraceful and fatal errors in practice and the paucity of publications, in comparison with those in other departments of therapeutic science.

"Questions, it is true (observes the author), are sometimes proposed to the candidate for diploma at Apothecaries' Hall, although not forming a necessary part of the examination, whilst examiners at the College of Surgeons take no cognizance whatever of the obstetrical qualifications of the student, a circumstance which sufficiently accounts for the indifference, not to say contempt, with which many regard this study."—*Preface, p.* viii.

He might have added, that licences to practise midwifery were formerly sold at the Royal College of Physicians in London; but, after it was discovered that the Fellows of that learned body were, by their own bye-laws, restricted from acquiring any practical information on the subject, their licenses became obsolete and despised.

To remedy one of the vicious consequences arising from those minute and arbitrary subdivisions of the profession, which were the offspring of academical pride and popular prejudice, an attempt was made to form an obstetrical society in this metropolis; and it is much to be regretted that such a needful institution was not supported and extended by legal enactment, as no branch of the healing art is so fit for, or so likely to be promoted by, separate cultivation. We would, however, on no account recommend the study of one branch to the exclusion of the whole; for we believe that any one, understanding every portion of a science, must be best adapted for exercising or improving any distinct part. Whoever, therefore, may expect to refine and improve his practice by contracting his education, would be like an agriculturist, who, instead of cultivating all his land with a view of producing cheap and wholesome food, of which all may partake, confines his attention to his greenhouse, that he may excel his neighbours in the propagation of expensive and useless flowers. In this respect, the mere physician or surgeon is often found to labour under a decided disadvantage, where his limited education is brought into practical competition with the omniscience of the general practitioner, "omnia scire; non omnia exsequi."—*Tacitus.*

The neglect with which the midwifery department has been treated by the Colleges of Physicians and Surgeons in Great Britain, has not escaped the notice of the profession at large; and we hope the time is not far distant, when the obstetrical professors will combine their efforts for the purpose of establishing a national institution, which may improve and regulate the cultivation and exercise of an art so useful to the public.

In the preliminary observations, with which the able work under review commences, the author reminds the young practitioner of the absolute necessity of obtaining an intimate knowledge of the various duties he may be suddenly called upon to discharge; as time and circumstances, especially in remote parts of the country, will often not admit a consultation.

"In the graver hæmorrhages, whether antecedent or subsequent to delivery, alacrity and promptitude are indispensable; hesitation is often fatal in its consequences, life is fluttering away, and, when time does not allow of a second opinion, the practitioner is at once thrown upon his own resources."

"If the student is not impressed with the value of human life, his own self-interest, so closely interwoven with his success in the obstetric art, paramountly demands an intimate knowledge of these very duties."

The infrequency of death, during or connected with the process of parturition, in the country in comparison with the metropolis, is accounted for by the author from the superior salubrity of the atmosphere and moral and physical condition of the patient, which, in preventing disease, and promoting recovery, operate with equal advantage. To these may be added the intimate knowledge of midwifery which the well-educated country surgeons are found so pre-eminently to possess. The most common causes of death appear to Mr. Ingleby to be hæmorrhage, and peritoneal (inflammation, improperly called) fever; and Mr. Robertson, one of the surgeons to the Manchester Lying-in Charity, asserts that more fatality arises from hæmorrhage than from all other causes. The brute creation, in the natural state, from the peculiar economy of the placenta, are exempt from those fatal hæmorrhages; but, when domesticated, some of them have been known to die from this cause. We have also found females of the canine race subject to a peculiar cause of death, namely, mortification of the uterus, before expulsion of its contents has been effected; which fact we have ascertained by repeated post-mortem examinations. In these cases, as soon as mortification commences, the uterine contraction immediately subsides. The remote cause of this extraordinary circumstance has been found by us to consist in a remarkable disproportion between the size of the mother and that of the young; the latter appearing much too large for expulsion by the natural efforts; and a corresponding disproportion has, on inquiry, been found to exist between the male and female parents. The decease of these animals, immediately after parturition has been completed, may probably be owing to some analogous cause.

The premature retirement of the accoucheur after delivery next occupies the author's notice, who makes some very proper remarks on the subject, accompanied by a detail of four cases of sudden death from flooding after delivery. We make it an invariable rule never to leave our patient, until we are satisfied that the uterus has undergone such a degree of contraction as may ensure her safety; and the vascular and nervous systems have recovered from the collapse, which often follows the most natural labour. When considerable hæmorrhage has taken place, the greatest care should be taken to prevent any sudden change of position; as women have been known to die in a moment, while in the act of rising up in bed for the purpose of taking food. In these cases, we are not to be guided by the amount of blood, but by the alarming effects produced from its sudden extravasation; after the constitution has been exhausted by previous pain and hæmorrhage. The best practice, in these cases, is to apply external pressure, which, the author justly observes, should be continued several hours, lest blood should insidiously accumulate within the uterus.

As a means of obviating hæmorrhage, and supporting the pendulous abdomen in the latter months of gestation, the author extols the use of bandages, particularly Dr. Gaitskell's, which he has modified so, that it is equally applicable before or after parturition, as will appear from the following note:

"I allude to the bandage commonly used; but I have modified Gaitskell's, so as to answer for either state, by inserting on each side, for the hips, two pieces of cloth, commonly termed gores, four inches in depth and three in width at the lower edge, and placed one inch and a quarter apart. Two plates adapt it for fitting the back. The bandage has two rows of loops, with corresponding tapes, and averages from 30 to 36 inches in width, and from 15 to 18 in depth at the centre. As buttons are placed at different distances round the lower edge of the bandage, understraps may be used if needful. This answers every purpose, and can be made sufficiently reasonable to be within the reach of the most indigent."

The application of a bandage having been neglected before serious hæmorrhage occurs, the simple plan of applying three napkins, described by Dr. Blundell in the Lancet, No. 265, page 801, may be adopted; or the following, recommended by the author.

"Rather than disturb a woman at such a moment, it will be better to pass a large towel or broad piece of linen *external* to the clothes, and draw it as tight as it can be borne. The discharges and wet linen, including the napkin and folded sheets, must be removed from about the person, as soon as possible, and dry linen substituted. After reposing an hour, or longer if needful, a suitable bandage may be applied. Care must be taken in conveying it round the body, not to disturb the position of the patient. The under garment, which during the last stage of labour ought to be taken away from the discharges, may now be adjusted; and a petticoat, which opens in front, being drawn underneath her, the broad top-band should be pinned sufficiently tight to afford an agreeable support. If the bed has been properly prepared, the patient may now be placed in it, or if she is already in bed, laid on the opposite side, slowly and without raising her."

"After four or six hours have elapsed it may be necessary to slacken the bandage, agreeably with the feelings of the patient, whose comfort will also be promoted by excluding the atmospheric air from the external parts."

Some useful directions follow, respecting temperature, repose and diet after the completion of the parturient process.

After-pains seldom occur as a consequence of the first labour; and, if our experience with the secale cornutum does not deceive us, we believe that they may be greatly modified by its exhibition before the detachment of the placenta, especially in such individuals, as have been formerly found to labour under a flaccid state of the parietes and feeble contraction of the uterus. These pains are of two kinds, active and passive: the former consisting of the natural, contractile efforts of the womb, and the latter of a forcible dilatation, occasioned by an influx of blood, often suddenly distending it to an enormous size. In all cases, when the uterus is distended with blood, which either from large, firm coagula or any other obstruction cannot escape, severe pain and tenderness are experienced; and these symptoms in extreme cases continue, until such a degree of decomposition of the extravasated blood takes place, as permits the entire evacuation of the uterus. This process frequently occupies several days, and simulates uterine enlargement, produced by subacute inflammation. This kind of after-pains is peculiar to persons advanced in life, or who have had several labours, and is probably that described in the following passage:

"But when severe and long continued, these paroxysms sometimes occasion febrile dirturbance, the uterus becoming large, and highly sensible to the touch; and when attended with *a defective flow of the lochia*, they may be considered as denoting a congested or inflamed state of the large uterine veins."

The active species of after-pain, particularly when proceeding from a partial contraction, will often require the aid of opium; the other is most effectually relieved by ergot of rye, assisted by an open state of the bowels.

The sub-acute inflammation, the seat of which is in the fibrous structure of the uterus, makes its appearance from the fifth to the tenth day; and, when it has attained its height, the organ acquires a magnitude fully equal to that, which it possessed at any period before the commencement of labour. It is accompanied with extreme tenderness, fever, thirst and a pulse at 102. The blood, when coagulated, has a thick buff on its surface, but is not cupped. The treatment consists in the abstraction of blood in small quantities, followed by the application of leeches and gentle mercurialism.

The customary period for decumbiture after parturition is five days. We agree, however, with the author that, after a severe labour or hæmorrhage, a much longer time should be enforced; and, where prolapsus is apprehended, it should be extended to several weeks.

"This plan has been attended with complete success, even in cases in which the uterus in the early months of gestation had fallen completely through the vulva. Very recently I was called to reduce, at the fourth month of gestation, a gravid uterus, which lay completely without the os externum. By means of the largest-sized globular pessary and the horizontal position, it was prevented, after its reduction, from again descending, and thus the ascent in the abdomen would be accomplished almost as early as in common cases."

By attention to position alone after confinement we have uniformly found prolapsus, occasioning the greatest distress before pregnancy, which of itself in the latter stages is a temporary cure, have been entirely obviated.

In the chapter on *menstruation occurring during pregnancy* the author states that the menstrual secretion rarely appears in the last six or eight weeks of utero-gestation in these cases, and believes that it proceeds from the uterus in opposition to the opinions of Denman and Hamilton. This however is not an original sentiment; for Cruikshank long ago supposed the secretion took place from the exhalant arteries of the uterus, which experience a periodical enlargement for this purpose.*

To evince the fact of the absence and termination of the decidua at the orifices of the fallopian tubes, the author relates the appearances observed in a fatal case of extra-uterine pregnancy, occurring in the practice of Mr. Bellamy.

In females of a plethoric habit *a hemorrhagic tendency is sometimes acquired by pregnancy*, which, neglected or allowed to proceed, usually occasions such a detachment of the placenta, as is inconsistent with the life of the embryo or fœtus. Hence arise most of the abortions in such constitutions. The most effectual treatment consists in adequate depletion, temperance and abstinence from violent exercise. There is a passive kind of hæmorrhage, the author observes, which arises from constitutional weakness; and to this class may be referred that which proceeds from a mechanical obstruction to the circulation.

Hydrops Amnii, a preternatural secretion from the amnios, next engages the author's attention; and in a note is recorded the following extraordinary case.

"A lady, subject to uterine hæmorrhage, was afflicted with dropsy of the ovum in her second gestation. At the fifth month her size was prodigiously large. The fluctuation was as distinct as in a case of ascites, and the legs threatened to burst. Indeed, had she not experienced aggravated symptoms of pregnancy, no one would have suspected it. At the sixth month the patient, who had then abandoned the idea of pregnancy, was delivered of twins, and a deluge of water reduced her to a state of imminent peril. In the third pregnancy the same symptoms recurred, but earlier than in the preceding. At the fifth month, she was as unwieldy as though she had reached the ninth. Small bleedings, abstinence from liquids, mild purgatives, diuretics, with the horizontal position, carried her on to the sixth—at this period the membranes unexpectedly gave way during the night, and twelve napkins were saturated with the fluid prior to my seeing her early in the morning. The singular part of the case is, that every second or third day the waters escaped, affording relief in proportion to the quantity discharged, being from a pint to a quart each time, so that fresh secretion must have been going on. I can vouch from frequent examinations that the fluid proceeded from the uterus. Either from the thinness of the uterus, or the small quantity of liquor amnii contained within the membrane after these discharges, almost every part of the child could be felt through the parietes of the abdomen; the knees could be distinguished from the elbow, and the head could be brought from the inguinal region to the hypochondrium, and *vice versâ*; just as the sutures of the fœtal head have been distinguished through the abdomen without lesion of the uterine parietes. Indeed, if the fluid had not been unequivocally passed through the os uteri, I should have regarded the case as an extra-uterine gestation. I scarcely need say that the fluid was not urine. Urine I am aware is not unfrequently mistaken for the liquor amnii in those discharges, which on muscular exertion are passed in the latter weeks of gestation. On one occasion the bladder was quite empty; on another, when the discharge was flowing away, I introduced a catheter, and drew off the urine. As the ninth month advanced, the head rested permanently on the pubes, and could no longer be moved about freely. She attained the full period, and was delivered of a child unusually large. At the second pain the secundines were spontaneously expelled, my hand receiving the mass, when at the outlet, lest its weight should tear the membranes. I then carefully examined the whole, and in addition to the aperture in the centre of the membranes, made by the passage of the head, there was a circular one very distinct just at the edge of the placenta. From this aperture the fluid had doubtless from time to time escaped, the patient prior to each evacuation being sensible, by a kind of passive contraction of the uterus, that it was about to come away. The situation of the rent accounts also for my not being able to draw off the liquor amnii with a catheter, though the attempt was frequently tried with a view of accelerating labour. The longest period I had known between the rupture of the membranes and the accession of labour was eight days. A respectable surgeon, formerly of this town, knew a case, in which a month intervened."*

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* Cruikshank's Anatomy of the Absorbents.

[*To be continued.*]

LXVIII.

ANALYSIS OF THE BLOOD AND URINE OF DIABETIC PATIENTS.†

WE need scarcely inform our readers that the labours of Dr. Prout have thrown considerable light on the various alterations of the urine coincident and connected with alterations of the system in general, or the urinary organs in particular. It has been stated, and apparently proved, by that able chemical physician, that in diabetes the highly-animalized principle urea is not to be detected in the urine, its place being supplied by sugar, a principle eminently vegetable. Prior to the appearance of sugar, in other words, before the diabetic condition is established, Dr. Prout asserts that albumen is found in the urine, and thus a regular series of changes is observed in that secretion, from its state of health to diabetes, and from diabetes back to its state of health. But it seems that chemistry has its fallacies as well as physic, indeed animal chemistry will, we fear, be for ever an uncertain branch of an uncertain science. For this gloomy notion we might offer several powerful reasons; but two will at present be sufficient—the varying character of the animal fluids, and their necessary alterations under the chemical re-agents to which they are exposed. Sure it is, that no two chemists will agree in their finer analyses of the animal solids or fluids. We do not intend to throw cold water on chemical investigations in connexion with physic; we think that they have already effected much good, and that they will yet effect much more. But we have seen enough to render us distrustful of the conclusions of this or that particular chemist, more especially if he deviates far from the ordinary track.

Mr. Kane, professor of chemistry to Apothecaries' Hall, of Dublin, has published a paper in the Dublin Journal, contradictory of the belief in an absence of urea from diabetic urine. He asserts that it is not even diminished in quantity in that disease. We shall not relate the manner in which he detected the error of Prout and others, but merely shew the method which he adopts to procure the urea. Before doing this, we may mention that he discovered that, if nitric acid (the re-agent by which the presence of urea is determined) be added to diabetic urine under ordinary circumstances, a considerable increase of temperature takes place, and urea is not obtained, a circumstance probably owing to some chemical combination between it and the acid. If the urine, on the addition of the nitric acid, be plunged into a freezing mixture, urea is procured in the quantity shewn by the following tables.

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* We regret that the late period at which we received Mr. Ingleby's important work prevents us doing much more than commence the analytical review of it. In our next number we shall give a full account of the remainder of the publication.—*Ed.*

† Dublin Journal, No. I.

"A given quantity of the urine was desiccated cautiously as long as it lost weight, retaining the temperature constantly below 212°, the residue gave the relative proportions of water and of solid matter in the urine.' To determine the quantity of sugar, an excess of solution of acetate of lead was added to the urine, and the precipitate separated by the filter. The lead in the filtered liquor was then thrown down by sulphuretted hydrogen, and the sulphuret of lead having been separated by the filter, the liquor was evaporated on a water bath to dryness, and the residue weighed; in some instances the confused crystalline mass was dissolved in spirit, and crystallized, but this part of the process was not found necessary.

The quantity of urea was determined by the process by means of which it had been first obtained in quantity; the mixture of acid and urine was immersed in a freezing bath, and the nitrate of urea deposited, separated, dried, and weighed, and the quantity of urea calculated from its known composition. The nitrate thus obtained, is slightly tinged, but being weighed in this state, it gave a closer approximation to the truth than if it had been purified and decolorized; in which case, a portion of it would infallibly have been lost. The quantities of urea given, are those actually found, and I consider that they are less than actually existed in the urine, as I only succeeded in diminishing very much the action of the acid on that principle, without, however, by any means putting a total stop to its exertion.

I think it probable, that the uric acid not having been found in diabetic urine, depends merely upon the great state of dilution of that fluid, and on the small quantity in which that animal acid exists even in healthy urine. Some trials which I made in order to isolate it, were not successful; want of time prevented me from determining the relative proportions of the different salts, but they certainly exist in the natural proportions, as their total quantity is diminished merely in consequence of the dilution of the urine.

The following are the results of the analyses of diabetic urine, performed on those principles.

A man in the Meath Hospital, April 20th, 1831.

Urine, Sp. Gr., 1032.

Water	929
Sugar	47
Urea	9
Salts, Uric Acid, &c.	13
	1000

Mackay, a patient in Sir P. Dunn's Hospital, clinique of Dr. Leahy, who kindly allowed me to examine the blood and urine:

Urine, Sp. Gr., 1030.25.

Water	942.75
Sugar	31.5
Urea	9.5
Salts, Uric Acid, &c.	16.25
	1000.00

A man in the Meath Hospital, May 6th, 1831.

Urine, Sp. Gr., 1036.25.

Water	913
Sugar	60
Urea	6.5
Salts, &c.	20
	1000

A man in Sir Patrick Dunn's Hospital, clinique of Dr. Graves:

Urine, Sp. Gr., 1033.

Water	929
Sugar	51
Urea	5.3
Salts, &c.	14.7
	1000

A man in the Meath Hospital, May 27th, 1831.

Urine, Sp. Gr., 1050.5.

Water	880.5
Sugar	70
Urea	13.5
Albumen	3
Salts, &c. and loss	33
	1000"

Mr. Kane also made some experiments on the blood of diabetic patients. He could detect no sugar whatever in it, although five grains of sugar, dissolved in water and mixed with a pound of blood previous to coagulation, were afterwards readily discovered in the serum. The following is the analysis of the blood, the quantity operated on being in no case less than eight ounces.

"A man in the Meath Hospital, clinique of Dr. Graves.

Sp. Gr., of Serum 1030.

The blood was composed of

Water	798.13
Fibrine	2.18
Hematosine	114.50
Per-oxide of iron	.45
Albumen	50.13
Phosphuretted fat	1.70
Osmazome, Salts and loss	33.21
	1000.

Mackay, Sir Patrick Dunn's Hospital.

Sp. Gr. of Serum 1029.75.

Water	781.0
Fibrine	2.9
Hematosine	130.4
Per-oxide of iron	.56
Albumen	45.5
Phosphuretted fat	2.0
Osmazome, Salts and loss	37.64
	1000.00"

We do not profess to offer an opinion on these chemical researches. The subject is highly deserving of attention, and will probably receive it from those who are qualified to pursue the investigation.

LXIX.

OBSERVATIONS ON SOME DISEASES OF THE VASCULAR SYSTEM. ESSAY I. DISEASES OF VEINS—ESSAY II. DISEASES OF CAPILLARIES. By T. A. WISE, M.D. Bengal Medical Service.

WE notice this pamphlet, in order to do an act of justice to an able and zealous member of our profession. From the facilities with which medical men residing in London, or the large cities of the empire, can lay their thoughts or their experience before the world, and from the rapidity with which they are disseminated by the periodical press, an advantage is given them which can hardly be possessed by the practitioner in the country or the colonies. With such men, the results of experience are too often buried. Dr. Wise, for instance, the author of the Essays now before us, has anticipated Mr. Arnott in many particulars; but Mr. A. from his residence in the heart of the Empire, having got the start of our countryman in Bengal, the latter is not likely ever to recover the ground he has thus lost. The Essays in question were read before the Medical and Physical Society of Calcutta in 1828, but were not published in their Transactions on account of their length, and of the expense of two ordinary lithographic plates. If there is one thing dear to a professional man, it is his reputation; and it does seem cruel, that one who has laboured in an investigation should have any credit or emolument which may be due to him wrested from his grasp by another. Such is said to be the case in the present instance. In a letter accompanying the pamphlet, a charge is openly and broadly advanced against Mr. Arnott, of plagiarising and purloining the author's property. We are no parties in the quarrel—we espouse neither side; but, as this is a heavy accusation, it is imperative on Mr. Arnott to meet it and repel it. In order that he may see with what he is charged, we shall insert the statement of Dr. Wise as it is transmitted to us, and we entertain no doubt, from the high character which Mr. Arnott bears, that he can satisfactorily remove the impression which such a statement, uncontradicted, would be calculated to produce.

"When dissecting in M. J. Cloquet's private room at St. Louis, in 1825, M. Richerand was unfortunate in several cases of amputation, which I examined. The cause of death, in these cases, led me to attend to the subject of phlebitis; and I had soon after the pleasure of finding my opinions approved of by the celebrated Dr. Edwards, of Paris, and others. The year following, I held the appointment of house surgeon at St. Bartholomew's, London, where I had an opportunity of verifying many of my conclusions; but I was still anxious to have the opinions of some of those, whose candour, industry, and discrimination, I thought I might rely on. One of these gentlemen was Mr. Arnott, at that time engaged in collecting cases on erysipelas; and it is but justice to myself to affirm, that I spared neither time nor trouble, as far as my then extensive opportunities afforded me, of assisting him in his researches. In those frequent meetings, I drew his attention to the subject, which I had been studying with much care. I shewed him the cases I dissected, my drawings, and placed in his hands the result of my labours on the pathology of the vascular system. I did this, of course, with the idea that he would not make any unfair use of them, nor do I suppose that either of the other two gentlemen,* to whom I was equally candid, ever heard him hint that he had an idea of publishing them as his own opinions—cases to which *I* first directed his attention, in confirmation of conclusions I had formed from former experience.

However, a few months after I had bid adieu to my country and friends, amongst whom I unsuspectingly included him, he read his 'Pathological Inquiry into the secondary Effects of Inflammation of the Veins' before the Medico-Chirurgical Society; to which, he says, his 'his attention was particularly directed, by some occurrences which marked the course and termination of the fatal cases of inflammation of the veins, after venesection, which he had an opportunity of observing (vide London Med. and Phys. Journal, No. 38, page 138, new Series). Then follows the account of three cases, two of the first, and I believe the third, will be found related in the following Essay, and were those that I particularly shewed him as proofs of my opinions. In some parts, perhaps, there may be a slight difference of opinion: but I believe they are few, and on points of little importance. Mr. Arnott was evidently necessitated either to mention my name, or content himself with appearing first before the public under a peculiar designation, although he was well aware that my Essay had been ready for publication before he had even thought on the subject.

More I could say in corroboration of those opinions; but I am disgusted with the ungrateful subject, and leave my essay to the candour and discrimination of an impartial public."

We have not space to give any thing like an account of the paper in this part of the Journal, but probably we may be enabled to notice it more fully in our next number.

LXX.

CASES OF ABSCESS PRESSING ON OR OPENING INTO THE VAGINA.

DR. DAVIS relates two cases of this description in Part VII of his Principles of Obstetric Medicine lately published. The first case occurred to himself. An intense inflammation of the left ovary terminated in an abscess so extensive as ultimately to involve the peritoneal flooring of the left lateral portion of the posterior chamber of the pelvis. The pain being chiefly referred to the hypogastrium and small of the back, an examination was made to ascertain the condition of the uterus. The orifice and neck were very tender to the touch, and a large fluctuating tumour was felt to occupy the left and posterior portion of the pelvic cavity, causing an extensive projection or convexity of the corresponding portion of the vaginal parietes towards the interior of the passage. The abscess, for such it was, was the result of a severe and much mismanaged labour. On examination of the body after death, the matter of the abscess was found to have made its way through the peritoneum of the posterior chamber of the pelvis into the cellular structure connecting the vagina and rectum with the inferior portion of the pelvis on the same side. For the particulars of the second case Dr. D. is indebted to Dr. Stroud.

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* "For obvious reasons I do not mention these gentlemen's names; but I am sure both of them will be happy to substantiate the facts, should that be considered necessary."

"Elizabeth Hunt, a married woman, fifty-three years of age, was admitted a patient of the Northern Dispensary under the care of Dr. Stroud, about two months before her death. During the previous four or five months she had suffered severe pains, first in her feet, afterwards a little above the right knee, and ultimately in the neighbourhood of the right hip joint. Her health was already much broken, and she was very feeble and emaciated. She was lame from the state, as supposed, of the hip-joint. Her appetite was greatly diminished. Her sleep was disturbed, and she was the subject of a slight hectic fever. During the patient's first visit to the Dispensary, she assigned no cause for her complaint except cold, and fatigue from laborious occupations. But during her second visit it was ascertained that, some months before, there had been a discharge of blood from the vagina, accompanied by a fainting fit, and that, subsequently to that period, blood had occasionally issued either from the vagina, or from the rectum. The alvine dejections were said to be contracted and of a flattened form. Under these circumstances an examination per vaginam was proposed, and with some reluctance permitted. 'Two fingers introduced into that passage, although with the greatest caution, gave much pain, and were withdrawn covered with blood. A hard round substance, supposed to be the uterus diseased and displaced, was found near the orifice of the vagina, projecting backwards in the direction of the rectum. On account of the tenderness of the parts, and the great weakness of the patient, a more accurate examination was deferred to a future opportunity. In the mean time the suspicion of a malignant disease of the uterus, which had been previously entertained, was now considered to be confirmed."

The patient died, and a very minute and unnecessarily prolix account of the dissection is appended. We may as well take this opportunity of protesting against the long list of nothingnesses which it seems the present fashion to cram into relations of cadaveric alterations. If disease of the uterus is to be described, the writer begins with the crown of the head, and tells of every thing healthy or unhealthy, natural or unnatural, that presents itself from that starting point till his arrival at the Ultima Thule, the sole of the foot. With laudable liberality all receives the same degree of attention, and whether we are told of the condition of the soundest organ, or of that which was chiefly diseased, the same amount of labour, and nearly the same amount of words is expended, and the weary reader wonders to which the author attaches most importance. It is really abominable that in order to learn the nature of a disease in a single organ or apparatus, one must wade through a dissertation on every other to be met with in the body. The case before us will be shewn to be one of psoas abscess, ulcerating into the vagina. Then what in the world can such information as the following be worth, or why should it be here unless to exhaust the reader's patience, and make him exclaim against morbid anatomists as absolute nuisances. "The cartilages of the ribs were very short, and the ensiform cartilage was extremely narrow. The heart was quite sound and contained recent coagula on both sides. The left auricle was rather large and the right ventricle small. The venous trunks were full, and the arterial ones empty. The coronary vessels, particularly the veins, were beautifully injected, embossing as it were the surface of the heart, with abruptly serpentine lines," and so on. What interest or utility can possibly attach to this? We might as well be amused with a geographical and statistical account of Peru, before entering on the description of a psoas abscess. We do protest most earnestly against such a system of case making and case taking, and when samples come before us we shall not fail to visit them with heavier censure than we deem it necessary to resort to at present. To pass to the principal pathologic features of the case—the right psoas muscle was found excavated by a very large abscess which extended outwards to the groin, and downward to the bottom of the pelvis, where it had formed one considerable opening into the vagina and another into the rectum. The cyst was filled with greenish pus and flakes of lymph, which had found their way into the vagina and rectum and prevented the escape of the pus. Some of these flakes were found quite putrid in the vagina. There was a small distinct abscess on the left side of the rectum and rather behind it. The cavity of the large abscess was traversed from above downward by the anterior crural nerve, which was entirely denuded, and at one point seemed contracted and almost reduced to a membrane, and above and below became suddenly large and dense. The bone at the sacro-iliac synchondrosis was denuded. The cellular tissue at the posterior part of the vagina, contiguous to the peritoneum was infiltrated with lymph and pus, the peritoneum presenting some adventitious bands. The posterior half of the vagina, immediately below the neck of the uterus was destroyed by an ulcer an inch in breadth, by which it communicated laterally with the cellular tissue alluded to, and inferiorly with the rectum by an opening large enough to admit the thumb. The posterior lip of the orifice of the uterus was to a certain extent destroyed by ulceration. The rectum at the perforated part was thickened, and the mucous membrane in front of it red and swollen. These are the essential particulars. The case was one of psoas abscess, and the changes about and in the parietes of the vagina and rectum were consecutive.

LXXI.

CASES OF CONTRACTION OF THE VAGINA.*

IN that portion of his work which treats of imperforate, obstructed, and contracted vaginæ, several interesting cases are related by Dr. Davis. From these we shall select two which occurred to himself, and are not uninstructive. The first is an instance of general, the second of partial contraction of the vagina. The first is so brief that we give it in the author's words.

Case 1. "Its subject was a lady of thirty-nine years of age, whose spine was considerably distorted by an injury which she accidentally sustained during her infancy. When she had been in labour only for two or three hours, she was advised by her monthly nurse, who probably anticipated more than ordinary difficulty, to send for her medical attendant. On the author's arrival, he found the orifice of the uterus very amply dilated, NEARLY OBLITERATED, and the fœtal head presenting favourably. In ascertaining these facts, however, he encountered some difficulty in carrying his finger through the middle of the vagina, where he found it contracted into a very narrow diameter, and presenting such a feel as it might have been expected to present, if it had been bound by a ligature coiled round it on the outside It moreover felt firm, thick, and rigid. The mother of the patient, being in attendance, reported that her daughter had always menstruated regularly and well, and that she had never been the subject of any known disorder of her genital organs. The affected part gave no evidence of its ever having been the subject of cicatrisation. Time and patience, therefore, presented themselves as the principal remedies. The cavity of the pelvis was sufficiently ample. The labour-pains became very active in the course even of a few hours, and ultimately exceedingly urgent, accompanied by a tempestuous excitement of the heart and arteries. The patient was bled freely and repeatedly, and the hand was as much used to promote dilatation as was deemed consistent with the soundness and safety of the part to be dilated. She was delivered of a still-born child in about FIFTY HOURS after the commencement of the labour. She recovered slowly but perfectly. She sustained no retention of urine, nor purulent discharges during her convalescence. The loss of an heir to a good property, as it might well be supposed, was not a little regretted. But the disappointment was forgotten, and the loss doubly repaired by the subsequent birth of two living children, both sons."

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* Dr. Davis's "Obstetric Medicine." Part VI.

In some cases of contracted vaginæ a considerable, and we may say, sudden dilatation occurs during labour, of which the following is not a bad example.

Case 2. The wife of a corn-chandler had a first labour of long duration, and attended with great excitement of the heart and arteries, and during her recovery she was subject to severe purulent discharge. In the next labour, another medical practitioner was employed. On making the usual examination, he found the vagina, about an inch and a half from its orifice, so contracted that he could not pass his finger through the narrowed portion. He ordered the patient a dose of castor oil: and, as it was early in the labour and late in the evening, he left her till the following morning. He then found that the pains had been neither frequent nor urgent; the contracted part of the vagina was somewhat less rigid, and, on one side of the ring, it was distinctly soft and relaxed. Nothing further was done till the following evening, when the labour became more active and the circulation began to be excited. The morbid ring was dilated to the size of about half a crown, continuing rigid, tuberculated, and thick on one side—soft on the other. The medical practitioner employed a full bleeding, exhibited forty drops of Battley's sedative, and remained with the patient during the night. Early next morning he sent for Dr. Davis, who did not arrive till 3, p.m. The orifice of the uterus was now dilated to the diameter of two inches and a half, the head of the child had descended nearly half way into the pelvis, *the membranes were unruptured*, the left side of the vagina felt hard and greatly thickened, but the other was soft and disposed to dilatation, when the child's head was propelled by the uterine contractions against it. The excitement of the heart and arteries was considerable, the skin moist. A pound of blood was abstracted. At nine, p.m. the symptoms were more formidable; the arterial action was very great, the countenance expressive of great suffering, the patient extremely restless. The liquor amnii had escaped for several hours; but the descent of the fœtal head had made great progress, one-third of it being in the act of clearing the impediment of the left side of the vagina. There was doubt as to what should be done; but, abandoning a resort to the forceps or the knife, it was determined to try the effect of another bleeding. The patient was accordingly bled to faintness (thirty-two ozs.) and with success. The excitement was allayed, and the patient, after sustaining some fifteen or twenty more powerful pains, was delivered of a living and well-grown child. Her recovery was speedy and perfect, and her family now consists of four children, of which the three younger have been born at the eighth month of gestation, in consequence of premature labour having been purposely induced in the pregnancies subsequent to the one we have described. All the labours have been extremely slow, and the two last rather alarmingly severe. The child whose birth forms the subject of the present case came into the world, like Tristram Shandy, with his head rather the worse for its voyage. It was considerably disfigured by the pressure it sustained in its passage through the narrow part of the vagina, and presented on its left side a furrow, long, broad, and deep, with some abrasion of the cuticle. We know not whether the father took the matter so much to heart, as did Mr. Shandy the flattening of Tristram's nose, by the newly-invented and all-but-perfect forceps of Dr. Slop. But this by the way.

"A case, bearing something of analogy to the one just narrated, may be found recorded in the first volume, p. 461, of the London Medical Repository. But as the practice which was described by its contributor as having been resorted to for its relief, has always appeared to the author much too hasty, as well as prematurely vigorous, he cannot give it a place in the present work without introducing it to his reader by an expression of regret, that a case so peculiarly important on many accounts, so supremely easy apparently as to its management, and so strikingly felicitous in its results, should have been given to the public, without the benefit of the most ample authentication. 'A woman fell into labour of her second child. The vagina seemed to be imperforate. But on more attentive examination, an opening was found very near the perineum, which appeared not to lead directly to the vagina, but to pass at first sideway downwards towards the rectum. It would not admit the point of the little finger. On dilating this with the first finger, the child's head was felt, high up, pressing against the obstruction, which extended a considerable distance along the vagina in the form of general contraction of the canal, rather than obliteration from adhesions. It became necessary to DIVIDE MUCH OF THE SKIN LINING THE VAGINA, and AT LAST TO DELIVER with the forceps. After delivery, a mould of wax, in the shape of a long pear, was worn, and has prevented the accident from occurring again. In her labour preceding this, she had been delivered with the forceps after three days pain, of a dead swollen child, and for a fortnight afterwards the catheter was used for retention of urine. The contraction was discovered within five weeks after delivery.'"

Dr. Davis concludes the subject by the mention of a case, illustrative of what certainly appears to have been infamously bad management on the part of some surgeon in the country. The patient was a young woman who became pregnant soon after her marriage, and, while on a visit to her friends in the country, had a premature labour a few weeks prior to the natural period. She represented her medical attendant as having used instruments, and experienced great difficulty in effecting her delivery. On her return to town, after a tedious and painful recovery, the vagina was found to present a perfect cul-de-sac, at the distance of an inch and a quarter from its orifice, the whole being perfectly smooth, lined with mucous membrane, and free from rugæ. Sir Astley Cooper declined an operation, and the case is irremediable. From all that he could learn, Dr. D. thinks that the employment of instruments must either have been totally unnecessary, or, if required, that they were used most unskilfully. Can any thing be more reprehensible than such culpable ignorance on the part of a medical man.

LXXII.

CASE OF ABDOMINAL WOUND. By JOHN JAMES HALLETT, Surgeon, &c.

I WAS sent for, on the 16th ult., to visit E. Brereton, a young man residing with his father, at about a mile from this place, and found him labouring under symptoms of mental derangement, which, however, were not so apparent at the time of my seeing him, as, from the account given me by his friends, who represented him as having used violent and unjustifiable threats to his parents, although naturally of an inoffensive disposition. His appetite, also, had fluctuated; for at some times he would refuse food for many hours, although a labouring man—at others, a moderate allowance for three or four men would not suffice to answer his cravings. He complained to me of a sense of deep-seated heat in his abdomen, about the epigastric region, with slight tenderness. He was very shy of being questioned, and refused any and every medicine; yet said that, if he could make up his mind in a day or two to take any, I should be sent for again. On the Monday following (the

21st), I was called in a great hurry, at 6, p.m., to attend him, as he had attempted suicide by plunging a knife into his abdomen. He had had one knife taken from him by his father, and another by a cottager, half a mile from his home, where he had run to on being interrupted at home; and it was with the third that he succeeded in producing the wound. I found him on his back, with an irregular, ragged wound, the direction of which was oblique, with the umbilicus for its centre. The extremity on the right side was the highest. There was a small tongue of integument and cellular substance at either end of the wound, presenting such an appearance, as induced me to imagine that the knife had been thrust in at the umbilical depression, drawn upward and outward, and then turned and pushed downward and to the left. My idea was confirmed in my own mind, by the appearance presented by the knife, which, when found, had a considerable quantity of fæces on its blade, near the point, and appearing to have been placed on it by a sort of turning or scooping action. This latter circumstance, coupled with the fetid odour emitted from the wound, amounted, I think, to almost the most direct evidence of a wound having been inflicted in an intestine. Lying on the abdomen, were portions of omentum and large and small intestine *inflated*, equal in contents to at least two quarts. The extreme extent of the wound was about three inches, which, from its nature and irregularity, possessed a capacity that it would not, had it been produced by a simple straight incision:—So much in favour of a replacement of the dislocated parts, though a larger portion had, of course, been protruded. Thanks to the jealousy which, I fear, actuates too many of our profession, having but recently established myself in this neighbourhood, circumstances conspired to render it necessary for me to undertake the case alone, which I did, and which I have had no cause to regret. The displaced intestines were but slightly if at all discoloured, and I contrived, without much delay, to return them in that order which I conceived necessary to securing a return of function. I applied a light dressing, with numerous broad and long cross straps of adhesive plaister; and over all a roller of linen, four times round the abdomen. For some hours my patient was tranquil; yet, aware that circumstances might arise which might tend to mischief, I remained all night, and it was fortunate that I did, for, about midnight, he struggled so violently with the abdominal muscles, that two knuckles of large intestine were thrown out between the sutures of the wound, of which I omitted to state I had applied three. The difficulty which I had now to contend with, was greater than that which was presented in returning the original mass. I first attempted to divide the sutures, but they were so imbedded beneath and among the convolutions, that the extreme risk of wounding the intestine induced me to desist. By dint of perseverance I at last succeeded, by gentle pressure, to return them again, though not until they (the intestinal convolutions) were more discoloured than I liked; they had also become perceptibly tender to the patient. After this all went on well.

Having learnt that his diet, for some days, had consisted of a small quantity of coarse bread daily, and that he had tasted nothing on the Monday, I would not bleed him, but determined to watch him closely, and do so should a shadow of excitement appear. On the second day the bowels acted four times, after taking two small doses of magn. sulph. and nothing occurred to excite my attention till the Sunday after the occurrence, when the patient complained of a slight tenderness in the region of the crest of the right ilium. The application of a dozen leeches quite removed this; and, as a measure of precaution, the leeches were re-applied in two days after. He has taken pulv. antim. gr. ij., c. ant. tart. gr. $\frac{1}{16}$ in a powder, and followed by tr. hyosc. ʒss., and liq. ammon acet. ʒij., in a draught every six hours.

The wound filled up early, and has now healed. It will be necessary, however to remove him to an asylum, which will be done on Monday next.

There has been no recurrence of the tenderness.

LXXIII.

FATAL CASE OF COMPLETE CYSTOCELE, OR HERNIA OF THE BLADDER. By MR. CLEMENT.*

THOUGH several authors of reputation have mentioned cases of hernia of the bladder and offered remarks on its origin and nature, they are still sufficiently obscure to make any additions to our knowledge of them desirable. The following case is related by Mr. Clement, and is equally interesting and instructive.

Case. Mr. Bowley, æt. 60, very corpulent, had been affected with scrotal hernia on the left side for five and twenty years. The hernia at first was very small, but had slowly increased until it attained a magnitude that will presently be described. The chief inconvenience experienced was from its great bulk and weight. He repeatedly, however, suffered from constipation of the bowels and slight attacks of hemiplegia. He could never make water without first raising the pendulous rupture from between his thighs towards his belly, when, after rolling it about for a short time, the urine would pass in a full stream, though never in considerable quantity at one time.

A fortnight prior to his death the bowels became obstinately constipated, and he was attacked with paralysis of the left side of the body. The more urgent symptoms of strangulation of intestine were absent, but there was constant stillicidium urinæ. The catheter was used several times by two surgeons in attendance, who believed that it passed into the bladder; not more than a tea-cup full of urine followed each introduction of the instrument. Strong purgatives and enemata were employed; the stillicidium urinæ was supposed to be dependent on the paralytic affection. No alvine evacuation was procured, yet the patient laboured under symptoms of retention of urine rather than strangulated gut. There was great pain about the pubes and in the rupture, which became more distended—articulation became indistinct, and the patient expressed his feelings only in a low muttering tone—he became delirious—and died. Such is the imperfect but correct outline of the case. Mr. Clement was first present at the examination of the body.

Cadaveric Examination 24 *hours after death.*—"The circumference of the rupture was two feet five inches; its greatest length, measuring in a direction over the pubes to the apex of the tumour, one foot two inches and three quarters. The whole of the penis was retracted within the integument covering the rupture; the opening through which the urine flowed very much resembled the navel, and this gave to the tumour the appearance of an immense umbilical hernia, extending over the pubes and falling down between the thighs. One of the testicles could be distinctly felt near the surface, about the middle of the tumour, but the other was not discoverable before the parts were dissected.

Although the rupture was so large as to extend generally over the pubes, and occupy both inguinal regions, it was easily ascertained, without making any incision, that the protruded parts came down through the left abdominal ring.

The examination was commenced by dissecting for the left inguinal canal, which was exposed, and part of the colon found passing through it greatly distended with feculent matter, but exhibiting no marks of inflammation or strangulation: the latter could not have taken place, the passage being so much dilated as to give the whole hand free admission into the cavity of the abdomen.

A semicircular cut was next made through the integument, following the course which the colon had taken downwards in the sac: this incision was continued some inches in length, when one of the testicles was exposed, and we were surprised by the sight of another distinct sac, very tense and containing fluid. By this we were led to suppose, that some portion of the intestine must also have protruded through the abdominal ring on the right side, forming a double kind of hernia. This part was again carefully examined, but no intestine could be traced to that side: besides, the surface of this second or supposed sac was too regular to contain either omentum or intestine; it formed the greatest bulk of the whole tumour, and more resembled a hydrocele, if it was possible to conceive one to attain a size so immense. By dissecting the integument from the surface, the apex of this second sac was found to be very thin, red, and pointed—in fact, appearing ready to burst: this inflamed part was accidentally ruptured, and about two quarts of very fetid urine was evacuated, which removed all doubt and previous uncertainty as to its nature.

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* Observations in Surgery and Pathology, pp. 144, et seq.

By following down the course of the urethra, which was wonderfully displaced from its natural situation, we discovered that the bladder of urine had protruded through the abdominal ring. Owing to the prejudices of the patient's friends, all the parts could not be brought away, so as to make a complete preparation shewing the relative situation which they observed to each other. The bladder was however removed from the body, and, upon examination of the prostate gland, which was much enlarged, I found that it had been perforated by the catheter, in the ineffectual attempts made to draw off the urine. The diameter of the ureters was so much enlarged, as to admit my fore finger with great facility.

The abdomen presented no marks of acute inflammation having recently taken place: the omentum was much loaded with fat, and the whole length of the colon was greatly distended with feculent matter.

In the pelvis there was nothing remarkable, excepting the want of the urinary bladder; the natural connexion which exists between that viscus and the inner surface of the pubes, was not to be discovered."

Cases like these are only useful when they afford a profitable lesson or serve to inspire future caution. There are several circumstances in the history of the case which might perchance have afforded a clue to its nature, if presented to a well-informed and reflecting surgeon. The long continuance of a large hernia unaccompanied with much disturbance of the intestinal functions, the occasional attacks of retention of urine, the mode in which the bladder was most easily emptied, the character of the final and fatal attack, might possibly have led an acute observer to suspect the real nature of the hernia, or will serve to do so to those who read the present particulars, and chance to meet with a similar case hereafter. We are not informed that the size of the hernia was diminished after the passage of urine, a circumstance generally, we believe, remarked in the recorded cases of hernia of the bladder. Mr. Clement adds some reflections on the mode in which hernia of the bladder takes place, but this is a topic on which we need not dwell. It is of more importance for our readers to be aware that the bladder having passed wholly or in part into the inguinal canal, a pouch is formed above by the peritoneum accompanying the viscus, into which pouch omentum or intestine, or both may descend, or even be accidentally strangulated. We have noticed this case to put practitioners on their guard, for although the knowledge of rare cases is of less importance than that of diseases of common occurrence, yet a surgeon from ignorance of the former may lose his patient and endanger his professional character.

LXXIV.

Mr. Lizars' Letter on Cholera.

To those acquainted with the professional zeal and professional acquirements of Mr. Lizars, any mention of them would be superfluous, and we need not therefore say that the letter before us is both instructive in a practical, and interesting in a physiological point of view. The letter also derives an additional degree of interest, from its having been the occasion of a personal attack on Mr. Lizars by some individuals in the Edinburgh Board of Health. An attack so ungentlemanly, so uncalled for, has seldom been witnessed of late years, and the general feeling of indignation which it aroused will prove we hope an ample guarantee, against the repetition of similar outrages from authority on common decency and common sense. Mr. Lizars may be persuaded that however galling such a scene may be to his feelings as a private individual, he has gained, not lost, in his public character. The spirit which could dictate in these days wanton insult on account of a professional opinion, is a lineal descendant of that which in darker ages could raise the Smithfield fire for religion, and persecute Galileo for science.

The first part of the paper contains a letter to Mr. Lizars from the able Professor of Montpellier, M. Delpech. Our readers are probably aware that M. Delpech conceives the semilunar ganglia, and abdominal plexus to be the principal and essential seat of the morbid action of cholera, and that he has found his ideas confirmed by numerous dissections. To establish this point is the main object of the present letter. We have already dedicated so much space to cholera, that we cannot enter into it again. Mr. Lizars is an anti-contagionist, and portrays in a manner equally argumentative and eloquent the absurdities into which contagion has led both Boards and individuals. That doctrine is now so generally abandoned that we need not discuss it here. Yet we cannot refrain from mentioning one instance of the cruel folly to which it has given birth in Scotland. While cholera was at its acmé at Fisherrow, *and when the most unrestricted intercourse by land and by foot passengers was allowed*, a solitary boat with two men from the place touched at Leith harbour. The poor fishermen had no sooner landed than they were hurried away under guidance of a guard-boat to perform quarantine at St. Margaret's Hope! We can scarcely believe that men in the possession of their senses could be guilty of such absurd injustice. We will not say with Fouché that such conduct is "worse than a crime—it is a blunder;" but assuredly it is both a crime and a blunder. As a matter of rational argument it cannot admit of defence, but when the injurious consequences upon a population already pauperized and ruined are considered, we shudder at the levity of men who can rashly deal abroad destruction, with such indifference and indiscretion. The following quotation is the only one we shall make from Mr. Lizars' pamphlet. It is obviously insusceptible of abbreviation, and yet contains a very valuable digest of the morbid anatomy of cholera. It is a "summary of twenty dissections."

"BRAIN.

Of this number twelve had this organ examined, and, in all, the arteries and veins of the integuments and muscles covering the cranium were distended with the dark blood, which, in some flowed like tar.

In ten, the blood-vessels of the dura mater were turgid with this blood; and in three, there were fibrinous coagula.

In seven, there was serous effusion under the arachnoid membrane.

In four, the pia mater was congested with blood-vessels.

In seven, the cerebrum was highly vascular; and in one, slightly softened.

In seven, the cerebellum was very vascular; and in three, its substance was slightly softened.

SPINE EXAMINED IN TEN.

In six, serous effusion between theca vertebralis and arachnoid membrane, and, in one of these, the fluid was bloody.

In two, serous effusion between arachnoid and pia mater.

In six, blood-vessels of spinal chord highly injected with the dark blood; and one with evidence of inflammation between dorsal and lumbar regions.

In six, the spinal or rachidian veins turgid with dark blood.

GANGLIONIC SYSTEM EXAMINED IN SEVENTEEN.

In ten, the neurilema of pneumogastric nerves was injected with blood-vessels; in one, the nerve was enlarged; in another, it was thickened; and in a third, the neurilema was inflamed with ecchymosed patches.

In six, the neurilema of splanchnic nerves was vascular; in two, the ganglia at their origins were vividly injected; and one ganglion was ecchymosed.

In sixteen, one or both of the semilunar ganglia were vascular; in one, it was inflamed; in three, it was enlarged and infiltrated with blood or serum; and in two, softened.

In eight, the solar plexus highly vascular throughout; in three, the ganglia and nerves enlarged, and one infiltrated.

In four, the renal plexus was very vascular.

In four, the œsophageal plexuses were vascular.

In one, the recurrent of the pneumogastric nerve was vascular.

In five, the cardiac plexus was enlarged, and very vascular.

THORAX.

Heart.—In three, the heart was flabby and pale; in two, collapsed; and many of them had the left ventricle so contracted and firm, as to contain only a drachm of blood. In thirteen, the right side was full of the dark gory blood, part of which was generally in the state of a fibrinous coagulum.

In three, the left side was full of the same blood with coagula.

In three, the right auricle full of dark blood and coagula.

In six, the left auricle full of dark blood and coagula.

In four, left ventricle was moderately filled with blood and coagula, and one affected with softening: in two, coagulum extended into aorta.

In five, right ventricle full of blood and coagula. In one, coagulum extended into pulmonary artery. In two, the parietes were softened.

Pericardium.—In one, this sac was distended with gas; in two, it was dry, like paper, and vascular; and, in a third dry, vascular, and diaphanous. In four it was vascular. In all, the coronary vessels more or less injected with dark blood.

Venæ Cavæ.—In all, more or less of the dark blood was found.

Pulmonary Veins.—In six, these veins were turgid with the dark blood.

Lungs.—In four, these organs were congested with the dark blood.

Pulmonary Artery.—In one, a large coagulum, which extended into its two large branches. In three, it was full of the dark blood; and, in three others, the vasa vasorum were highly injected.

Pleura.—In five, highly injected; and in two, there was effusion of lymph.

Aorta.—In all, it contained more or less dark blood, with fibrinous coagula; in six, the vasa vasorum were highly injected,—the dark blood, and occasionally coagula, extended into the carotid, brachial, femoral, tibial, ulnar, and radial arteries.

ABDOMEN.

Peritoneum.—In nine, this membrane was highly injected; in six, evidently inflamed; and in three there was albuminous effusion, with some turbid serum. In one, the omentum was very vascular; and in another, it was inflamed.

Stomach.—Generally of a white colour both on its peritoneal and mucous tunics, and containing more or less of the rice-water fluid.

In seven, there were distinct vascular patches on the mucous coat, with several ecchymosed spots, varying in size, from that of a sixpence to that of a half-crown; and in all, there was manifest softening. In one, the mucous tunic was eroded.

Small Intestines. — In twelve there were evident marks of high inflammation, and vivid and extensive injection; in nine, ecchymosed patches; in four, mucous tunic softened in many points; and in one, incipient ulceration. Contents of a viscid white mucous, or greenish colour; and in two, they were bloody.

Large Intestines. — Transverse arch and sigmoid flexure of colon, commonly spasmodically contracted. In five, vascularity, with ecchymosis. Two inflamed, with softening; and one with ulceration. Two with dark venous congestion, similar to intestine in strangulated hernia.

Contents generally rice-watery, or gruelly and flocculent, occasionally greenish and viscid. In many, the colon, with the exception of the caput cæcum, was empty.

Liver.—Very various in colour; two

with Bright's yellow deposit. In some, the vena portæ were moderately congested; and, in one, the biliary ducts full of bile.

Gall Bladder.—Generally two-thirds full of rather inspissated olive green bile. In the twenty cases, ten were full of this fluid; the others varied from a little bile to two-thirds.

Pancreas.—Generally healthy.

Kidneys.—Commonly healthy; but varying, like the liver, according to the habits of the individuals. Three were slightly congested; one gorged with the dark blood; and another presented a livid appearance.

Urinary Bladder.—In all, contracted, and almost empty. When any fluid was present, it was about a drachm of mucopurulent. One, however, was contracted horizontally, and contained five ounces of limpid urine."

LXXV.

ANEURISM BY ANASTOMOSIS, REQUIRING EXTIRPATION.*

ANNE EVANS, aged nine months, was brought to Mr. Clement, at Shrewsbury, with a tumour on the forehead, resembling in all respects the "aneurism by anastomosis." It was very prominent, oval, rather larger than a shilling in circumference, of deep purple colour. Under gentle pressure, it communicated a vibratory pulsating feeling to the finger: but, under firm compression, this sensation ceased. Four large tortuous arteries ran superficially into the substance of the tumour at different angles. At the birth of the child the tumour was only half so large; it had increased with great rapidity during the last two months. Mr. Clement determined to tie the vessels leading into the tumour. He placed ligatures round the two upper, which pulsated strongly, and were nearly as large as crow-quills; but the child struggled so violently, that he deferred securing the two lower. Little change, save a diminution of the force of the pulsation, was produced in the tumour. On the following day, Mr. Clement secured the two inferior arteries. The pulsation of the tumour ceased entirely; it became more tense and of darker colour, and seemed ready to burst. On the next day it was much softer, less prominent, and not so livid; and, on the second day, it was quite flaccid, and scarcely darker than the integument around. The ligatures separated on the fifth day, the tumour having become flaccid and barely discoloured. On the second day after the separation of the ligatures, the purple colour and pulsation of the tumour had returned, and in nine days, it was as large and discoloured as before the operations; the four large arteries were not perceptible, nor was the tumour so prominent. Mr. C. now excised the tumour. Although he made the incisions at a considerable distance from the base of the tumour, where the integuments did not appear unusually vascular, the hæmorrhage was very alarming. The child was much exhausted, but recovered perfectly in the course of a few days, though the cavity of the wound was so deep, that nearly seven weeks elapsed before it was filled up with healthy granulations.

Mr. Clement makes some remarks with which we do not altogether coincide. He observes that "every other method, excepting that of complete extirpation, has generally failed in curing this affection." If by extirpation Mr. C. implies excision, the observation is incorrect; for the ligature is employed more generally than the knife, and at least with equal success. We have repeatedly seen these nævi and aneurisms by anastomosis cured by the ligature. A small nævus may be tied by simply passing two double ligatures, crossing each other at right angles under the base of the tumour, and either strangulating each half by making two knots, or including four portions of the tumour, by separately tying each end of the two double threads. If the nævus is of large size, or if the case be one of aneurism by anastomosis, which is nævus of a larger growth and affecting the vessels of the cellular tissue, then the employment of the ligature, in the manner recommended by Mr. Brodie, is perhaps the best method. Mr. B. passes two long needles, which cross each other at right angles beneath the base of the tumour, and under these applies a circular ligature so tightly as to strangulate it. He has operated successfully in this manner on several cases. The first case in which he employed it is related in a recent volume of the Medico-Chirurgical Transactions, and was copied into this Journal. The most perplexing cases of aneurism by anastomosis, are those in which a large extent of surface is irregularly affected. A boy, for instance, was recently in St. George's Hospital with an enlargement of the blood-vessels of the left cheek, angle of the mouth, angle of the orbit and probably part of its interior, and temple. The pulsation was indistinct, the disease, according to the mother's account, on the increase. It was not deemed prudent to attempt an operation.

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* Mr. Clement's Observations in Surgery, &c.

LXXVI.

Lithotomy in a Female Child.*

A female child, five years of age, was brought into the House of Industry, at Shrewsbury, in a state of great debility and emaciation. She complained of constant pain in her belly, cried violently when in the act of making water, and had much excoriation of the external organs of generation, and of the skin between the thighs. This latter was removed by proper applications, and Mr. Clement was induced to examine the child's bladder, which he did with a common probe. He discovered a stone, which appeared to be one of such size as to preclude the idea of its being capable of removal by any dilatation of the urethra. Mr. C. however, attempted to dilate it so far as to introduce a pair of forceps, and crush the stone. This was found to be impossible, on account of its extreme hardness, and the child suffered so severely, that Mr. C. determined to perform lithotomy, which he did on the 25th July.

"The child being placed in the same position as for lithotomy in the male subject, I first introduced Sir Charles Bell's largest sized male staff into the bladder, and placed it upon the stone, giving instructions to my assistant to retain it in that situation. With a large scalpel, I made a long and free incision along the side of the vagina nearly down to the anus: the point of the knife was then passed into the urethra and carried onwards to the neck of the bladder, when the urine gushed out in a full stream. I next introduced the fore-finger of my left hand into the bladder, and felt the calculus;—after ascertaining that the incision was sufficiently large to admit of its easy extraction, the forceps were introduced (my finger acting as director for the blades), and a stone larger than a pigeon's egg was immediately extracted. A piece of oiled lint was placed lightly in the wound, and the patient removed to bed.

The performance of the operation occupied only a few seconds, and the child apparently suffered less from the incisions than from the previous attempts which were made to seize and break the calculus.

It would be useless to follow up and to describe minutely the details of this case; I shall, therefore, only observe, that in the course of sixteen days the wound was perfectly healed, and the child able to run about, suffering no inconvenience from the operation excepting the want of power to retain the urine.

She was taken from the House shortly afterwards, by her parents, and I lost all sight of her until last year, when I was happy to find that the stillicidium urinæ no longer continued to trouble her. The bladder, however, continues irritable, for the patient cannot allow any large quantity of urine to accumulate in it. In every other respect, she is perfectly well."

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* Mr. Clement's Observations in Surgery, &c.

LXXVII.

Excerpta Choleralogica.

I. Importation of Cholera.

It is not a little remarkable that the introduction of this mysterious disease into each city and place can be clearly traced—when at a great distance—but never, when under our own sight. Thus if we ask the advocates of importation, how cholera was imported into Sunderland? They answer, we cannot tell; but we can shew you how it was traced from Jessore into Calcutta. How did it travel, man from man, to Newcastle? We know not; but we know how it travelled, by means of personal communication from Bengal to Bombay. Can you trace it from Newcastle to Haddington? No. But we can trace it from Bombay to Bagdad. From Haddington to Musselburgh? No. But from Bagdad to Ispahan. From Musselburgh to Kerkintilloch? No. From Ispahan to Moscow. Can you tell us how it was introduced into London? Oh no. But we can tell you how it radiated from the barques into St. Petersburgh. Such are the facts upon which the doctrine of importation rests. Our Hibernian brethren seem to be amazingly puzzled about the introduction of cholera into Dublin, as will appear by the following document, which deserves record, as it will prove of some importance, perhaps, hereafter.

Central Board of Health for Ireland.

March 30.

"The Board were engaged on that day and yesterday in examining the different reports of the medical gentlemen who attended the cases, and hearing *viva voce* evidence on the subject, from all which it appeared that the symptoms of these cases very much resembled those described as attending the epidemic cholera in England, but the Board were not able to trace the disease to any communication by which it might have been introduced into the neighbourhood of Dublin."

The central Board ought to have provided themselves with some keen-scented cholera hunters from this side of the water, who would soon have found them a ship-scraper, a pedler, or a mendicant who came from some "infected district" of England, and carried the dire contagion with him in his wallet or knapsack. The Irish Board has shewn a lamentable lack of foresight on this occasion! P.S. As we expected they have here committed themselves. The disease has spread, and they themselves proved that it was not traceable to any contagion!

II. So too, cholera has taken the Gallic capital by surprise. Instead of landing at a sea port, as it is said always to do, and "travelling" by the great roads and channels of human intercourse, it has thought proper to step at once into the heart of France—aye, and into the heart of its capital, without paying the least respect to the documentary line of march chalked out for it "by authority"—and by the various historians who have traced its progress on the contagious route, from Jessore to Sunderland! This, certainly, is not as it *ought* to be! But so it is:—and it may give us some insight into the authenticity of those documents which have emanated "from authority," among the slaves of Persia, the hordes of Russia, the tongue-tied vassals of Prussia, Austria and other countries. The unfortunate bias which was given to the investigation in England, "by authority," has, for very obvious but humiliating reasons, cast a stigma on the medical profession of this country, which will require half a century to efface. True it is, that a few independent and resolute minds have stood in the breach, and defended the ramparts of truth and science, when the battalions of contagionists and importers poured like a torrent upon the devoted citadel. They flinched not. They resisted the fearful preponderance of their countless adversaries, till reason dawned, and gave them powerful auxiliaries, from the very ranks of their opponents. The delegates of the "grand nation," and the quarantine restrictions of our Gallic, Spanish and Lusitanian neighbours, were cited as proofs that all nations regarded cholera as an indubitably contagious malady, to be stemmed and bounded by cordons and files of bristling bayonets! Let us hear then, what the first physicians of the "most civilized country" in Europe, say, when the epidemic is pouring into their hospitals.

"The undersigned physicians and surgeons of the Hôtel Dieu think it their duty to declare, in the interest of truth, that although up to the present time this hospital has received the greatest number of persons affected with the cholera, they have not observed any circumstance which authorises them to suspect that the disorder is contagious. (Signed)

"Petit
"Husson
"Magendie
"Honou
"Samson
"Gendrin
"Recamier
"Dupuytren
"Breschet
"Gueneau de Mussy
"Cailiard
"Bailly

"*Done at the Hôtel Dieu, Paris, March* 31, 1832."

Most of the other hospitals have followed the example of the Hôtel Dieu.

We shall not revert to the humiliating picture of our own professional magnates on a similar occasion. The large and black or red letters that *were to be* painted on the tenements of cholera patients, fortunately could not find painters—and London, that was confidently prognosticated to be a "*Charnel-house*" by the first of May, 1832, is now, (10th May) almost free from the pestilence! We will not be so uncharitable as to suspect that the PROGNOSTICATORS would have gloried in the accomplishment of their horrible anticipations; but, from what we have seen and *experienced* during the last three months, we have not the smallest doubt that, had the prediction been verified, the contagionists would have presented a petition to parliament, praying that the anticontagionists might be burnt, en masse, in Smithfield, "fire and ashes" being first sprinkled on their heads!

The proofs of cholera being a local epidemic, rather than a contagious disease, are daily multiplying. Thus the Duke of Orleans, the Archbishop of Paris, and many distinguished personages were in the habit of daily visiting the hospitals and conversing with the cholera patients, without catching the malady; while Casimir Perrier, busily employed in his cabinet, together with many others took the disease. This does not look like contagion. And when we find more than a thousand men stricken down in one day, and upwards of 400 of them perishing, in various parts of a great metropolis, can we possibly connect this with personal contact or contagion? But then some of the medical officers have died of cholera. Have they a special protection against an epidemic or an endemic influence? Why should not they be affected as well as Casimir Perrier, and several of the nobility of Paris? Were not the faculty, by their avocations, compelled to visit those localities where the primary causes of the epidemic were in greatest activity? Were they not obliged to spend great part of their time in the vitiated atmosphere of crowded hospitals, and the wretched apartments of the sick? Did a single physician or surgeon of a cholera hospital in London catch the disease, at a time when the talented and lamented Dr. Dill, of the London Fever Hospital caught the typhus and died of it?—That distinguished and gifted individual was busily employed in the investigation of cholera, visiting the sick, and dissecting their bodies—yet he caught—not cholera, but typhus, and fell a victim on the fifteenth day of the fever! Had he belonged to a cholera hospital; or had he caught this highly contagious epidemic, we should never have heard the last of this incontrovertible proof of the contagion of cholera.

III. Ely Board of Health.

This hopeful scion of a celebrated stock in London and Edinburgh, has come to a most logical conclusion that cholera is contagious, "under certain circumstances," in the malarious locality of Ely. What are these certain, or rather uncertain circumstances adduced by the sapient Board of Cambridgeshire? *First*, some two or more individuals of the same house have taken the disease in succession—and *secondly*, individuals who came from a distance to attend the funerals of their friends in Ely, caught the disease there. Ergo, cholera is contagious. Let us compare this with some other similar circumstances and events. Several soldiers, in the same barrack, at Fort St. George, have become affected with hepatitis, in succession:—Secondly, some Europeans, who had just landed, and went to occupy the same barracks, became ill with hepatitis—ergo hepatitis is contagious. Now facts of the latter description are every day presenting themselves at Madras and other places, yet no one thinks of drawing the conclusion which the Ely Board of Health has drawn.

IV. PROGNOSTICATIONS.

IT is well known that the Editor of this Journal hazarded a prophecy some eight or ten months ago, that, should the Asiatic pestilence reach our shores, it would be shorn of its terrors, and produce much less destructive ravages than in other countries through which it has travelled—or where rather, it has originated. The prophecy has, like many other prophecies, been partly fulfilled—partly falsified. The epidemic did *not* come shorn of its terrors—for the panic was universal. But the more important part of the prognostication was verified. The impression of the malady on the soil of Britain was extremely slight. It is sufficient to say that, during the first fourteen days of the epidemic in Paris, there died double the number that died in all England (including London, Edinburgh, and Glasgow) in seven months! We need say no more on this point at present.

V. BARON HEURTELOUP ON THE PARIS EPIDEMIC.

WE quote the following passage from the Baron's letter to the Editor of the Times, 24th April, 1832, after the Baron's return to Paris.

"I cannot close this letter without saying a few words upon the important question of contagion; and I must here take occasion to affirm, contrary to the opinion of the contagionists, that notwithstanding the frequent contact between those suffering under the attack of cholera, with numerous individuals who have visited them in all parts of the city, not one single example of contagion could be cited. And if some persons, after contact with cholera patients, have been attacked by the malady, that must be attributed to the influence of general infection, and by no means to the communications which may have taken place between the healthy and the sick. Besides, the non-contagion doctrine, supported as it is by an infinity of proofs, has been proclaimed by all the physicians of the Hôtel Dieu, and by nearly all those attached to the other hospitals. The only question now is, to determine whether one or more cases of presumed contagion will pravail over an immensity of facts which prove the contrary, and whether there be not ground for this reflection—namely, that though the existence of contagion should be proved with respect to some individuals, it is necessary to take into consideration the frequency of its occurrence and the quantity of evil which may result from it,—in a word, to ascertain whether this quantity of evil is not inferior to that which is necessarily produced by sanatory measures. It would be a foolish attempt of the people of Paris to endeavour to escape (and the infection of Paris proves that such escape is impossible) from a less evil by submitting themselves to a much greater. Finally, it is bad logic that would lead to the conclusion, that to save 10,000 individuals from the risk of taking the cholera, 50,000 should be starved to death in consequence of the restraints imposed on commerce by sanatory measures. The whole question of contagion depends, I think, upon striking this balance.—I am, &c.

BARON HEURTELOUP.

VI. MODIFICATIONS OF OPINION.

IT is well known that our contemporary, the LANCET, laboured most indefatigably in the cause of contagion:

and, from the circulation and influence of that Journal, we have no doubt that the subscribers to that doctrine have been centupled through the country, where written documents were all the evidence on which practitioners could depend; and where the *travelling* of the disease, by personal communication was made out most luminously. When, however, the evidence of the senses was thrown into the scale, the medical profession began to waver—and now, the advocates of contagion, as an essential character of the epidemic, are very few indeed.

We will allow our opponent on this point of controversy, to speak for himself; and give him much credit for the candour with which he avows a change, or very important modification of his opinions, though some of the reasons for that change are not to us very conclusive.

"In the interval that elapsed between the publication of this article, and the first appearance of the cholera in England, every feature in the disease proclaimed the absolute and direct operation of contagion. With the rapidity of an arrow it crossed by the Spree, and descended the Elbe to Hamburgh. Halting as it were here, it next broke out in one of our *maritime* ports on the coast opposite to that last infected. Here it dwelt for many days and weeks, and at last, step by step, and with all the characters of a disease still essentially contagious, it reached Newcastle and the adjacent villages, and lurked in them almost with the demeanour of contagious typhus.

Up to this period we maintain that to all reasonable men, the statistical history of the cholera was such as to permit no other rational conclusion than that it had reached England from the European continent by human intercourse, and had extended itself in England by that channel alone. Had the disease ceased at that time, *no other conclusion could have been adopted.*

But since that period the statistics of cholera have undergone the most complete alteration. In Great Britain it sprang up in Haddington, in Goole, in Hull, in Ely, in Rickmansworth, and in a dozen other places, which have little or no intercourse with each other, and with the fury of a West Indian hurricane, it has now burst out in Paris, in a few days sweeping off 20,000 victims to its rage. These facts again turned the scale, to shew us the operation of the unknown epidemic influence. They prove that infection is no longer the *essential* cause, and even tend to indicate that, for a time, its operation may be materially suspended. Such is the sole inference which an unprejudiced mind, anxious only for the truth, can derive from the contemplation of these events. If the operation of contagion was palpable in the transit of cholera from Berlin to Sunderland, the influence of some other cause is equally proved in the subsequent irruption of the disorder. The man who makes this inference changes 'no opinions.' Opinions are of a double kind, those founded on facts and reasoning, and those hazarded without a knowledge of either; rational opinions must undergo modification with the facts they flow from.

Even in the localities occupied by the disease, the most rigid scrutiny often fails to trace the operation of infection. In one district of London, thirteen families were, to our own knowledge, infected; but the first case having occurred in each without any appreciable infective cause, the other cases are inconclusive, as they might have originated in the unknown source by which the first was occasioned. This position is as clear as the construction of a common syllogism."

The Reviewer in the Lancet expresses his opinion that "*the presence of an epidemic cause* is, to a certain extent, a protection against human poison; or, in other words, that it is principally *in places free from the epidemic* that the disease can, under ordinary exposure, spread from person to person." This is strange reasoning. It amounts to this, that cholera is contagious when *sporadic*; but when epidemic, it loses that character! Valeat quantum!

The Medical Gazette also has been forced, by public opinion, to modify its doctrines not a little. While clinging to the doctrine that cholera *may be* contagious (which few have doubted), the learned Editor acknowledges that his "estimate of the *degree* of its contagiousness is very much reduced." "We had anticipated (says he) that, *when* the disease came to this country, the doctrine of contagion would have been extended and confirmed; whereas just the reverse has happened." This is candid, we acknowledge; but why the Editor of the Medical Gazette should lose his temper, and abuse all who held an opinion contrary to that which he is now forced to abandon, is not quite clear. It is certainly very impolitic in him to shew his anger so unequivocally and so frequently. It evinces a losing game.

We have received a letter from Surgeon Martin, of the 73d regiment at Malta, respecting cholera, of which he had ample experience during the years 1818, 19, 20, and 21, in India. The numerous facts and arguments which he adduces respecting the non-contagious character of the disease are now somewhat late, and the most strenuous advocates of contagion are now beginning to take rational and moderate views. We shall, however, extract a passage or two from the letter of our zealous correspondent. "Upon the subject of the disease being conveyable from one part of the globe to another by ships, &c. I never but once, during the above period, heard it even suggested. When the disease, of a very malignant character, first appeared at Point Pedro, in the Island of Ceylon, many vessels were daily clearing out for different parts of the coast, yet no disease was communicated to any of the ports to which they went—the cholera pursuing its own course uninterrupted along the coast of Jaffnapatam, and thence to Trincomalee, over an immense tract of jungle, where I witnessed its devastation, arriving at Ballacolloa, by such regular marches that its daily progress might have been laid down on a map before-hand." "I would ask the contagionists how it was that this deadly disease would make its appearance in a quadrangular fort, or the filthy narrow lane of a bazaar, attacking the occupants of only one face of the fort, or one side of the bazaar, leaving the remainder of the inhabitants, for that time, in perfect health." "While the 73d Regt. was drawn up one morning on the parade ground at Trincomallee, several men were simultaneously attacked with cholera, and were all dead and buried the same evening; yet not one of the others were seized with cholera at that time." Unfortunately the active depletory treatment recommended by Mr. Martin has not been found applicable to the epidemic of this country, for the reasons pointed out in our last number, especially the premonitory diarrhœa, by which the patient is too much depleted before that stage of the disease arrives which resembles the Indian cholera.

VII. CHOLERA IN GLASGOW.

THE contagionists are losing ground in every direction where the personal knowledge of cholera obtains. Thus at Glasgow, (as appears by the last number of the Glasgow Journal,) the doctrine of contagion has sustained a signal defeat. Dr. Auchincloss, in an able report from the "Town's Hospital," has clearly shewn that the disease arose spontaneously, not only in different wards of the hospital, but in different localities of the town, without any positive evidence of its being propagated from person to person afterwards. It appears that, in Glasgow, as elsewhere, diarrhœa was the premonitory or rather the primary stage of cholera.

In the review department the editors have taken the side of non-contagion, and our friend Mr. Moir, of Musselburgh, cuts but a sorry figure when his "proofs of the contagion of malignant cholera," are overhauled by the rigid censors of Glasgow. After citing some of Mr. Moir's "proofs," the reviewer remarks—"he (Mr. Moir) must presume his readers to be fools, or he intended to gull the contagionists, when he believed that even they would swallow such absurd nonsense."

VIII. PROOFS OF IDENTITY.

"THE malady (Cholera in Dublin) has

decidedly altered its type, since first *introduced*. Not one patient in thirty has it now in the original form. FEVER, with cramps, vomiting, and sometimes purging, is the form which at present is most prevalent, and it generally yields to antiphlogistic treatment."—*Medical Gazette.*

It will be remembered that the Irish Board of Contagion declared that the disease was not *introduced*, but occurred spontaneously; yet still the darling doctrine of importation is clung to with as much tenacity as their salaries! But now we find this specific disease which has *travelled* by means of personal communication from the Jumna to the Liffey, all at once changing its type, and becoming a gastric fever! Truly this is a strong proof of identity!

IX. FUNDAMENTAL DOCTRINE OF CONTAGION.

Mr. ORTON is labouring hard in his vocation to disprove all he had formerly asserted respecting the non-contagious nature of cholera. We shall here advert to a curious circumstance which has escaped the notice of Mr. Orton's critics. It is well known that Mr. Orton stated in the Westminster Medical Society, that his opinions on the non-contagious nature of cholera were hastily formed, and that it was during leisure reflection afterwards in England he altered his sentiments. This might have been admitted had Mr. Orton cancelled a single leaf of the second edition of his work, which exhibits an exceedingly awkward disclosure. When Mr. O. had got as far as page 165, he refers to his Appendix, where he tells us that the balance of evidence will be found clearly *against* the infectious nature of cholera. But alas! between page 165 and page 313, certain circumstances occurred which entirely changed Mr. Orton's creed, and this very Appendix comes upon us crammed with arguments in favour of contagion, Mr. Orton forgetting to cancel page 165, where he refers to the Appendix with a totally different view!! What the reasons were which changed Mr. Orton's creed in the course of a few days, or at most, a few weeks, we are unable to divine. Perhaps the arguments in favour of contagion which emanated from the Board of Health just about that time, may have dazzled our author, and coming from his military superiors may have carried more weight than as emanating from other sources.

Be this as it may, Mr. Orton is now very hard pushed for arguments in favour of contagion, when he has recourse to the effluvia from the fæces of those labouring under diarrhœa, as the disseminating cause of cholera. The Parisian cholera is now clearly traced by Mr. Orton to a person with diarrhœa "who sleeps at Calais, infects the atmosphere of at least one public privy there, and perhaps transgresses the prohibition stuck up on the Boulevards, 'ni faire ni deposer ses ordures,' and passes on. The disease immediately afterwards appears there, &c."—risum teneatis amici?

And is all the beautiful chain of proofs which connected the cholera of Hamburgh with that of Jessore, now vanished into air—the mal-odorous air of *privies!* The dirty doctrine of diarrhœa is the last stay and hope of the contagionists! But even here, Mr. Orton has evinced his usual shortness of memory. It is not even a second-hand, but a third-hand doctrine. Dr. Whiting maintained it months before Mr. Orton wrote in the Medical Gazette (May 19th) and Dr. Kirk (page 14 of his work on Cholera) distinctly enunciates the doctrine which is claimed with such an air of originality by Mr. Orton. There is no doubt, however, that this *stercoraceous* hypothesis was hailed with delight in the *privy*-council of Whitehall.

X. CHOLERA IN CORK.

Dr. D. B. BULLEN has recently published a short, but practical pamphlet on the epidemic, as it has appeared at Cork, of which we can take but a very brief notice. The disease first broke out on the 5th of April, in the person of a youth of eleven years of age, who died in about 13 hours. On the 13th and 14th of the same month, several well-marked cases occurred, in low, ill-ventilated lakes, among densely crowded inhabitants "living in poverty, wretchedness, and filth."

"In some houses, several families were living in actual contact with a mass of putrefying animal and vegetable matter."

"Upon every inquiry, there are no grounds for supposing, that cholera was imported into Cork. A strict quarantine was established upon all vessels arriving in the harbour from suspected ports, and not a single case occurred amongst the shipping. Although the epidemic existed for some weeks in Dublin, before it appeared in Cork, still the persons first attacked in the latter city, could not possibly have had any communication to give reason for suspecting that the disease was produced by infection. It is a singular fact in the propagation of this epidemic, that it should have broken out and spread along the eastern coast of England, whilst so many great towns in the same parallel, upon the western part of the Continent escaped, and that it should have established itself in so extensive and severe a form in Dublin and Cork, upon the eastern and south-eastern coast of Ireland, before any town upon the western coast of England had been attacked."

Dr. Bullen considers the epidemic as a febrile disease presenting three stages, now so well recognized. In the first stage he recommends emetics, followed by calomel and other aperients. In the second stage, or that of congestion, he depends chiefly on calomel. He assures us that "not a single case of cholera has been lost in the North Cholera Hospital, where the constitutional effects of mercury were produced." He placed a scruple of calomel on the tongue, with one grain of opium, and washed it down with some warm brandy and water. If relief was not produced, he repeated the dose every two hours, until three doses were exhibited. In the stage of consecutive fever, the treatment depended on the symptoms, and on the organs chiefly affected. Dr. B. properly deprecates specifics in a disease consisting of distinct periods, each requiring appropriate treatment. The pamphlet is creditable to the author.

XI. Saline Injections in Cholera.

WHEN the administration of saline medicines, whether by the mouth or per anum, was proposed for the cure of cholera, we then observed that this practice was surely carrying coals to Newcastle, since the saline ingredients of the blood were drained from the circulation into the alimentary canal, and consequently the addition of other saline medicines in that quarter was superfluous. We find that Dr. Latta of Leith, in his communication to the Central Board of Health, avers that the introduction of saline solutions into the intestines of cholera patients "aggravated the tormina, vomiting, and purging." So much for Dr. Steeven's plan of curing cholera, said to be successful in the hands of one practitioner in London. Of that success we shall here say no more than that any remedy, however inert, or even absurd, may gain great reputation towards the close of an epidemic, when Nature herself is generally equal to the cure. But the physical effects, resulting from the injection of aqueous saline fluids into the blood, are of a positive nature, and capable of demonstration. They appear, in the present case, to be very important, and likely to lead to other and still more important results. The following extract from Dr. Latta's letter, as published in the Lancet, is deserving of great attention.

"The first subject of experiment was an aged female, on whom all the usual remedies had been fully tried, without producing one good symptom; the disease, uninterrupted, holding steadily on its course. She had apparently reached the last moments of her earthly existence, and now nothing could injure her—indeed, so entirely was she reduced, that I feared I should be unable to get my apparatus ready ere she expired. Having inserted a tube into the basilic vein, cautiously—anxiously, I watched the effects; ounce after ounce was injected, but no visible change was produced. Still persevering, I thought she began to breathe less laboriously, soon the sharpened features, and sunken eye, and fallen jaw, pale and cold, bearing the manifest impress of death's signet, began to glow with returning animation; the pulse, which had long ceased, returned to the wrist; at first small and quick, by degrees it became more and more distinct, fuller, slower, and firmer, and in the short space of half an hour, when six pints had been injected, she expressed in a firm voice that she was free from all uneasiness, actually became jocular, and fancied all she needed was a little sleep; her extremities were warm, and every feature bore the aspect of comfort and health. This being my first case, I fancied my patient secure, and from my great need of a little repose, left her in charge of the hospital-surgeon; but I had not been long gone, ere the vomiting and purging recurring, soon reduced her to her former state of debility. I was not apprised of the event, and she sunk in five and a half hours after I left her. As she had previously been of a sound constitution, I have no doubt the case would have issued in complete reaction, had the remedy, which already had produced such effect, been repeated.

Not having by me the number of The Lancet containing Dr. O'Shaughnessy's analysis, I adopted that of Dr. Marcet, only allowing a smaller proportion of saline ingredients. This I now find to be considerably less than natural, according to the more recent analyses. I dissolved from two to three drachms of muriate of soda and two scruples of the subcarbonate of soda in six pints of water, and injected it at temperature 112° Fah. If the temperature is so low as a hundred, it produces an extreme sense of cold, with rigors; and if it reaches 115°, it suddenly excites the heart, the countenance becomes flushed, and the patient complains of great weakness. At first there is but little felt by the patient, and symptoms continue unaltered, until the blood, mingled with the injected liquid, becomes warm and fluid; the improvement in the pulse and countenance is almost simultaneous, the cadaverous expression gradually gives place to appearances of returning animation, the horrid oppression at the præcordia goes off, the sunken turned-up eye, half covered by the palpebræ, becomes gradually fuller, till it sparkles with the brilliancy of health, the livid hue disappears, the warmth of the body returns, and it regains its natural colour,—words are no more uttered in whispers, the voice first acquires its true cholera tone, and ultimately its wonted energy, and the poor patient, who but a few minutes before was oppressed with sickness, vomiting, and burning thirst, is suddenly relieved from every distressing symptom; blood now drawn exhibits on exposure to air its natural florid hue.

Such symptoms, so gratifying both to the sick and the physician, must never allow the latter to relax in his care—the utmost vigilance is still necessary. At first the change is so great that he may fancy all is accomplished, and leave his post for a while. The diarrhœa recurring, he may find his patient, after the lapse of two or three hours, as low as ever. As soon as reaction by the first injection is produced, mild warm stimulants, such as weak gin-toddy, mixed with some astringent, should be freely and assiduously administered. An attempt should be made to fill the colon with some astringent fluid. That such is requisite, is evident from the watery diarrhœa returning with violence, and if not restrained, death will ultimately make sure of his victim, therefore so soon as the pulse fails, and the features again shrink, the venous injection must be repeated, taking care that the fluid in use retains its proper temperature. The injection should be carried on very slowly, unless the patient is much exhausted, when it may be used more rapidly at first, until a little excitement is produced, after which it should not exceed two or three ounces per minute, and now is the time for the exhibition of astringents by the mouth, which will be retained, for in general the sickness entirely leaves during the operation."

Other cases, tending to shew similar effects, though not all successful, are related by Dr. Lewins, Dr. Craigie, and Dr. Mackintosh. We hope that future experience may confirm the sanguine anticipations which the above cases are calculated to excite.

LXXVIII.

Dr. Falrich's Wax Models.

The models that we have examined are faithful reprentations of the natural structures, and are very creditable specimens of this beautiful art.

No. 1. This model is principally confined to the anatomy of the superficial parts of the cranium and face, a few structures only being shown in the neck. The facial muscles are very accurately represented, but the principal merit of this piece is the beautiful view it presents of the disposition and connexion of the several facial nerves. The branches of the portio dura (respiratory nerve of the face of Bell's classification) the three terminations of the 5th pair (the supra orbitar, infra orbitar, and inferior dental) together with the intimate communications of these nerves, are finely and accurately displayed. This piece also shews the inosculations and courses of the several blood-vessels, especially the veins of the scalp and face. The opposite side of the model (one side only being dissected) contains a correct representation of the features and external configuration of the cranium and face.

2. This model shews all those parts which are exposed by making a vertical and median section of the skull and face and upper part of neck. It is a very useful model, because it accurately represents the *relative situation* of the numerous and important organs contained in the cranium and face. Thus it displays the several coverings of the skull—the two laminæ of the bones—the diploe—the position and relative connexion of all those parts of the cerebrum, cerebellum, and medulla oblongata, that are placed on the median plane. In the face it shews the septum narium, the cavity of the mouth, the palate, uvula, and the parts connected with the fauces, pharynx and larynx.

3. Contains the stomach, liver, gall-bladder and kidneys. The stomach is faithfully and correctly represented as to its form, colour, vessels and nerves. The concave surface of the liver, with its lobes, fissures, nerves, and gall-bladder, is also shown. I consider this model and No. 1, as the best in the collection.

4. Bend of the arm, showing the parts connected with venesection. The superficial veins and their relation to the brachial artery are well displayed. The median nerve is introduced, but the cutaneous ramifications are omitted, which in such a model is a defect.

5. This is a very good representation of the several parts of the base of the brain, including the blood-vessels, and the origin of the several cranial nerves. This is a useful model. There are some other good representations of the convolutions and of the brain.

6. A very natural model of the position of the fœtus in utero at the full term—showing the position of the head, trunk and limbs—likewise the umbilical cord, and a part of the placenta, with the connexion of the funis.*

LXXIX.

A Statistical View of the Number of Persons reported to have died of each of more than 100 Kinds of Disease, and Casualties within the Bills of Mortaliy, in each of the Two Hundred and Four Years, 1629—1831, &c. &c. By J. Marshall, Esq. Quarto, pp. 81, with numerous Tables, &c. 1832.

It is the melancholy but the useful task of the medical philosopher to desist occasionally from the *treatment* of diseases, in order to mark their rise, acmé, and decline on the great chart of human existence—to calculate arithmetically the *rate* at which they abridge the span of life, and mark their influence on the population of states and cities. This is a study which expands our ideas, enlarges our views, and philosophises the mind. Our readers will therefore excuse a short article in this place on a subject which has too seldom occupied the pages of our Journal.

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* The above models we have seen at Mr. Highley's in Fleet Street.—*Ed.*

The volume before us is a very curious, elaborate, and meritorious work, which ought to experience the patronage of the profession—especially of the higher grades, the corporate bodies, the libraries, and the book-societies. The labour of examining the bills of mortality for upwards of two hundred years, must have been prodigious, and we sincerely hope that Mr. Marshall will be substantially rewarded for his praiseworthy pains and research. The approach of the far-famed epidemic cholera no doubt stimulated the author in his undertaking; but it appears that Mr. Marshall was at work on the subject long before the pestilence broke out in this country.

It was in 1629, that reports of diseases and casualties, of christenings and burials, within the bills of mortality, first began to be published by the worshipful company of parish clerks; and it has been objected to these returns that the office of reporting deaths and casualties has devolved on old women entitled "SEARCHERS," when it ought to have been filled up by medical men. There is no doubt that the reports would have been more exact in a technical point of view, had medical practitioners been employed; yet still, as the searchers could have no rational motive for misrepresentation, we may conclude that the returns are, upon the whole, as accurate as could be expected even under better auspices. The most interesting features of these reports are seen in the uniformity of some diseases, the extinction of others, and the seeming origin of new ones—and last, not least, the manifest aggregate diminution in relation to the aggregate population. Unfortunately we have no accurate census of the population prior to the year 1750. And even since then, we have some hiatuses and defects. It appears, however, that the population of London rather decreased than augmented from 1700 to 1750, more especially within the walls of the city. In 1631, the population of the metropolis was 130,178. In 1700, it amounted to 208,300.

"From the preceding data, and statement of Burials, as exhibited at page 67, it appears that the proportion of deaths to the Total Population of the City, in 1631, was as 1 to 21; and, in 1700, as 1 to 24; while the proportion of Burials in the whole of the Metropolis, according to the Statements at pages 62, 63, and the Statement of the Population at page 12, was as 1 to 33 of the Total Population in 1700; 1 to 26 in 1750; and as 1 to 52 in 1820. It must be observed, however, in regard to the otherwise seeming disparity between the proportions of Burials in 1750 and 1820, that the two Metropolitan Counties of Middlesex and Surrey, in the twenty years 1801—1820, received an accession of more than 375,000 Inhabitants, as immigrants from other parts of the United Kingdom, &c.; and this, it will be seen on reflection, without, comparatively speaking, any material increase of Deaths. From this also it may be inferred not only how difficult it is, but how entirely futile it must be, to attempt to establish, with arithmetical precision, an exact scale of proportion which the deaths bear to the living, not only in the Metropolis, but in any particular district where the facilities of intercourse and tendency to change of location so extensively prevail."

It is not a little curious to observe the difference of mortality in child-bed, between the early and the latter parts of the two hundred years embraced by these tables. In the *former*, the annual average of deaths was 234—in the latter 201, while the number of births had been nearly doubled. Abortions and still-born are more uniform.

"The great number reported from 1647 to 1752 to have died of *Teething*, and the progressive diminution since the latter date, form a feature deserving attention, as does also the gradual to total extinction of *Rickets*, after much prevalence from 1647 to 1715; and generally the diminution of diseases *incident to infancy* may be regarded a circumstance as honorable to the assiduity and integrity of the Medical Practitioner, as it is gratifying to the Friends of social Improvement. There are, however, some indications of Nature seeming determined to cross the purposes of the Medical Practitioner, in despite of all his assiduity: *Coughs, Croup, and Dropsy in the Brain*, all indicate a determination, since 1790, to fill up the void of Mortality which the diminution under the head of *Convulsions* otherwise seems disposed to occasion. *Dropsy in the Brain*, in particular (see Col. 10, Period IV), appears to deserve attention: how far this Disease may have been confounded with Convulsions, or otherways, prior to 1790, is a point which I must leave to the Medical Professor to determine. In the three preceding periods it is reported under *Headmoldshot, Horse Shoe Head*, and *Water in the Head*;—and its prevalence, as reported from 1715 to 1752, and gradual diminution, almost to extinction, subsequent to the latter date, form another feature deserving of notice."

Consumption, which forms so prominent a feature in the catalogue of diseases, may be regarded as remarkable for its uniformity, especially in relation to asthma and "phthisic," with which it is blended from 1690 to 1700, and from 1729 to 1739. Prior to 1690, asthma is not specified. In the three latter periods (embraced by these reports) consumption, asthma, and phthisic, are placed in juxta-position. From 1629 to 1710, the eruptive fevers, small-pox and measles, are as remarkable for their variableness as some other diseases are for their uniformity.

"Subsequent to the introduction of inoculation, the Small-Pox became far more general and confirmed in its virulence, which continued up to the period of the introduction of Vaccination, since which time it has gradually abated; but it is a fact, which seems in a very high degree to deserve attention, that the *Measles*, which continued exceedingly variable and moderate down to 1800, since that date (notwithstanding, as is fair to be presumed, the improved treatment of the Disease) have become greatly increased and confirmed in virulence. The increase of *Erysipelas* also, as one of the order of Eruptive Fevers, although at present inconsiderable in its effects, is not undeserving of notice."

From 1629 to 1689, fevers seem to have been exceedingly variable; but, from the latter date, down to 1750, more uniform and general. From 1750 to 1831, fevers have gradually diminished, while inflammatory complaints have increased in a still greater ratio than the pyrexiæ have receded. Dropsy appears to have progressively increased from 1629 to 1750, subsequent to which date, it seems to have abated, but manifests a tendency to increase again, since 1810.

Of the pestilential epidemics, the great one of 1348-9, was the most terrific. It commenced in Cathay (Western Tartary) in 1345, whence it spread North, West, and West and South, to every part of the habitable world. The consternation which it produced, and its various modes of action are well described by Cantacuzenus, a Greek historian of that period, of which a translation was given by Mr. Barnes, of Cambridge, in 1688. The following extract is an interesting curiosity.

"This plague, taking its rise from the Scythians or Hyberboreans, overran almost all the sea coasts of the habitable world, and destroyed an incredible number of people. For it did not only pass through *Pontus*, and *Thrace*, and *Macedonia*, but also through *Hellas*, and Italy, and all the Isles; and Egypt, and Lybia, and Indæa [Ethiopia], and Syria, and in a manner all the world round about. But it was such an unconquerable evil, that neither any diet nor strength of body could resist it; for it pulled down all bodies alike, as well the strong as the weak, and those who were most diligently looked after perished as well as those who wanted all things. That year was free from all other distempers; but, if perhaps any person was sick before, all other distempers terminated in this. Here the knowledge of the physicians was put to a stand: for some, enduring a little, died the same day, some the same hour; but those that held out the second or third day were first taken with an acute fever, and, the distemper getting up into the head, were rendered speechless, and insensible to all that was done; and so dropt off as it were in a profound sleep. But, if any ever came to themselves a little, they endeavoured to speak something, but the tongue was with difficulty moved; and so uttering many inarticulate things, the nerves being stupified in the hinder part of the head, they presently died. Others were not taken in the head but in the lungs: these had an inflammation in their inwards, which created acute pains about the stomach, so that they sent up blood and a loathsome and cadaverous stink from within; their jaws and tongues were dried up with heat, and black and tainted with gore; and whether they drank much, or little, it was all alike: these could take no sleep, but were in continual pain and disquiet. Some had imposthumous ulcers, and black blisters, bigger or lesser on their arms and under their arm-pits; and some in the cheeks, and others in other parts of the body. And in others there arose black nodes, spots, or tokens, over all the body, in some more superficial and visible, in others deeper and obscure: and yet of both sorts all died alike; for some had all these symptoms together, others more or less, but to most even one of all was enough to do the business. Yet those few who recovered were no more touched with the same mischief, but remained secure; for it never took any twice so as to kill. Sundry times there were great imposthumes in the thigh, and in the arms, which being cut sent forth much stinking matter; and so the disease was carried off, flinging forth together therewith all the noxious humours. And yet some, though they had all these symptoms, were beyond all expectation saved. But there was no certain remedy: for what was good for one was to another in the same condition fatal: yet he that cured another got his own death thereby, and this made the greatest havoc, so that houses were emptied of inhabitants, even brute creatures, dying with their masters. Yet nothing herein seemed more dismal than the despair to which men were reduced: for when any one perceived himself sick he abandoned all hopes of recovery; and thus they gave themselves over and died presently, adding their defection of mind as an assistance to the disease. Such a kind of malady cannot be expressed; and it was most manifest that it was not any plague natural or common to mankind, but a scourge from heaven: wherefore many also were bettered thereby, not only of those who died, but as many as survived. For then, casting aside all their vices, they applied themselves wholly to the study of virtue, and several gave all they had to the poor. But, when any found themselves affected, there was none so stony or so obdurate but that he repented heartily of his sins; and thereby gave the Divine goodness some occasion of being gracious at his tribunal."

Naples lost 300,000 people—Florence 400,000, and Avignon was depopulated. Nearly four million of souls perished within the pale of the Holy See! Paris lost 50 thousand, and Norwich 57 thousand—the same number that died in London. The following passage is curious at this time.

"One of the worst features to which the Pestilence of 1345—50 gave rise, was the accusation of different Sects and Parties of Poisoning the Waters, and other similar Mal-practices, and assigning to them the cause of the desolation which had prevailed. Both Christians and Jews, in their turn, appear to have been persecuted unto death in great numbers. At Mentz 12,000 Jews are stated to have fallen victims to the fury of an ignorant and brutal populace, under the pretext of their having poisoned the waters of the wells of that city."

In 1379, we find the mortality from an epidemic was so great that "the country became almost desolate." In 1478, the sweating sickness—in 1500, 30,000 died of the plague in London—in 1518, the same disease carried off infinite numbers of nobility and others. In 1529, the sweating sickness prevailed all over the kingdom—1542, hot agues and fluxes—1545, the great plague—1552, the sweating sickness again, and very general—1557, hot burning agues, seven aldermen in London died—1563, 21,500 died of the plague in London—1593, the plague again, of which 17,890 died in London—1603, the plague carried off 30,000 in London. The bills of mortality, or "display of the diseases and mortality," as they are called, commences from the latter date. When we examine the table (page 66) shewing the proportion of deaths from plague, in each week, from 1593 to 1665, we find that it prevailed 20 years out of that time, during some of which, viz. in 1603 and 1625, it nearly equalled in mortality the great plague of 1665. Thus, in the months of July, August, and September, 1625, it killed from one to four thousand weekly in London. In 1665, it presented itself in the last week of April—rose gradually to seven thousand a week, and fell in December to 281. In that fatal Summer, it carried off 68,506 souls!

When we contemplate the bills of mortality in this book, and compare the devastations of former epidemics with those of our own times, we have reason to be thankful for the improved state of health enjoyed by the inhabitants of this great metropolis.

We recommend this volume to the patronage of the profession—a patronage which, we are sorry to say, has been denied it, in one, at least, of those great corporate bodies where patronage ought to be found!

LXXX.

CYCLOPÆDIA OF PRACTICAL MEDICINE, Parts III., IV., and V.

(Continued from last Number.)

THIS work goes on prosperously—indeed its success is now beyond doubt. We shall not attempt to notice all the articles in this vast assemblage, especially in an analytical manner. Nevertheless, we shall glance at those which are most adapted for comment or quotation.

1. AUSCULTATION. This, of course, is from the pen of Dr. Forbes, and we need hardly say that it is well executed, seeing the great pains taken by the author in translating Laennec, and in prosecuting the subject of auscultation in his own practice. We can only give the following extract from this condensed article.

AUSCULTATION OF THE HEART IN THE FŒTUS—DIAGNOSIS OF PREGNANCY.

"M. Mayer, of Geneva, appears to have been the first who applied the tests afforded by auscultation to discover the existence of the fœtus in utero. In the *Bibliothéque Universelle* for November, 1818, it was stated that this gentleman had ascertained that the sounds of the fœtal heart are readily perceptible by applying the ear to the abdomen of the mother. The subject was afterwards prosecuted, with the aid of the stethoscope, by M. Kergaradec, and with additional results indicative of its importance; and the following facts, verified by numerous auscultators in this country and on the Continent, are now as well ascertained as any detailed in former parts of this article.

There are two auscultatory signs of the presence of a living fœtus in the womb—1. the double sound of the heart; and, 2. the existence of the bellows-sound in the placental arteries, or rather, in the uterine arteries immediately connected with the placenta.

1. The pulsations of the fœtal heart may be perceived as early as the fifth month, or between that and the sixth. They are characterised by the double sound of the adult heart, and by the peculiar rhythm of this, which can never be mistaken for any other sound. The sounds, when compared with those of the adult heart, examined in the cardiac region, are extremely feeble; but they are, when at all perceptible, perfectly distinct. They are distinguished from all arterial pulsation of the mother by the duplex rhythm, and by the extreme frequency of their recurrence. The fœtal pulsations are generally more than double that of the mother. The sounds are found to be much more distinct at one time than another, in the

same place, and in different places at different times. These variations no doubt result from the varying position of the fœtus, and from its relation to the uterine parietes.

The sounds will be much more distinct when the trunk of the fœtus is in direct contact with the uterus, and, most of all, when the anterior part of its chest is applied opposite to the spot on which the stethoscope rests. When the whole body of the child is removed from that side of the uterus over which the instrument rests, it is doubtful if the action of the heart can be at all perceived. The more copious is the liquor amnii, the less perceptible, *cæteris paribus*, will be the fœtal sounds. The space over which the sounds may be heard is generally pretty extensive, being, indeed, frequently the greater portion of the region occupied by the uterus. It is, however, in general easy to discover the point which is nearest to the source of the sounds, by the decreasing and increasing intensity of these, as our examinations recede from or approach towards one particular spot. In general, the pulsations of the fœtal heart vary from 120 to 160 in a minute. In one case noticed by Dr. Ferguson,* the relative frequency of the mother's and child's pulse was singularly reversed; the former being 100, while the latter was only 20. We have met with no similar instance on record.

2. The second auscultatory sign of the presence of the fœtus has been termed the *placental sound*, or *placental bellows-sound*, likewise the *utero-placental soufflet*. It was first noticed by M. Kergaradec, and although a less absolutely certain indication of pregnancy than the sound of the fœtal heart, it is a sign of great importance. Although termed placental, there can be little doubt that the site of the sound is in the uterus, in the enlarged arteries which supply the placenta.† The sound assumes, at different times, all the character of the bellows-sound of the heart. It becomes perceptible about the fourth month of gestation, and is then more distinct than at a later period. Dr. Ferguson says that he has not observed any variety of the sounds to be peculiar to particular stages of pregnancy. In the early stages, Laennec describes the sound as resembling that which is produced by discharging a blast from a pair of bellows into an empty bottle. At a later period, the sound is duller, more diffused, and no longer conveying the impression of being limited to the caliber of a single artery. It assumes all the varieties of the valvular sounds of the heart, from the simple bellows-sound to the sound of the rasp or saw. Dr. Ferguson says that the most constant variety 'is a combination of the bellows or the sawing with the hissing sound, commencing with one of the former and terminating with the latter.' These sounds are confined to a much smaller space than those of the fœtal heart. The point where they are most audible is always fixed in the same person, but varies in each individual. In some, the sound can only be detected in a single spot a few inches square. There is no particular part of the uterine tumour in which the sound may not be found; but Dr. Ferguson says that he has found it most frequently in the iliac regions. The placental sound is always isochronous with the pulse of the mother, and is unaccompanied by any degree of impulse.

Whatever be the precise mode of production of this sound, there can be no doubt that it has its seat in the enlarged vessels of the uterus in that portion of it immediately connected with the placenta. This is proved by the following facts:—1. The sound, as already stated, is confined to a fixed space in each individual. 2. This spot is ascertained, by examination after delivery, to be always that to which the placenta had been attached. 3. That the sound is not seated, at least exclusively, in the placenta, is proved by the fact that the sound is still audible for a short period after the placenta is detached. 4. It ceases immediately upon the contraction of the utero-placental arteries, as is proved in cases of death of the fœtus without delivery, and by its instantaneous cessation on the contraction of the uterus after delivery. 5. It is in all cases synchronous with the mother's pulse. There seems little ground for believing, with Dr. Kennedy,* that the placental arteries themselves have a share in the production of the sound, any farther than by their action promoting that of the uterine arteries. The character of the sound is *changed* by the cessation of the fœtal circulation, as by the removal of the placenta, the death of the fœtus, or tying of the cord (Dr. Kennedy denies M. Ollivry's statement that it is immediately *extinguished*), the sound becoming 'abrupt, of short continuance, and wanting the lengthened terminating whiz observed in the perfect sound.' This may easily be explained by the change necessarily produced in the uterine circulation by the removal of the fœtal circulation, without supposing that the placental arteries had any direct share in its production.

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* Dublin Trans. vol. I. New Series.

† "A striking analogical instance is afforded by the thyroid arteries in bronchocele, noticed in a former part of this article. *Query*, will the same result be obtained in active hypertrophies of other parts of the system?"

Great care and attention are requisite on the part of the auscultator in investigating these phenomena. The sounds being very feeble, perfect silence is necessary during our explorations, and we must be very careful not to confound the sounds with others which may exist at the same time, such as the sound of the mother's heart (which is often distinctly audible in the region of the uterus), of the intestinal movements, and the sound of muscular contraction produced in compressing the abdomen with the stethoscope. As the phenomena are sometimes intermittent, or, at least, not always perceptible, we must not deny their existence because they are not discovered on the first examination.

The sounds may be heard almost as well by the naked ear as the stethoscope; but to all who are accustomed to use this instrument, there are numerous and very obvious reasons why it should be preferred. It is, however, well that practitioners should be aware that the phenomena may be detected by any one, whether a practised auscultator or not."

The article bathing is also from the pen of Dr. Forbes, and occupies 48 columns. Dr. F. collects all the best information from the best sources, and concentrates them for the benefit of his readers in a moderate compass.

II. BLOOD AND BLOOD-LETTING. By Dr. MARSHALL HALL.

As the talented author has paid great attention to these subjects (especially the latter) and written, *ex professo*, on one of them, we may consider this article as a resumé of the writer's more extended work. He divides his remarks into two sections—the first treating of the natural, the second of the morbid state of the vital fluid. On the natural condition of the blood we shall not dwell. The morbid changes relate to quantity as well as quality. The blood is often deficient or superabundant—as in anemia and plethora. In various diseases, Dr. M. contends that the qualities of the blood are deteriorated, and seems inclined to infer, that these deteriorations are the cause, rather than the effect of disease. Much may be said on both sides of this question.

"Considerable changes are induced in the blood in *inflammation*. It is well known that the blood drawn in inflammation of the serous membranes is apt to be cupped and buffed; that is, the cruor is firm and contracted, and its edges are much raised above the central part of its surface; and its upper portion consists in a substance nearly deprived of colouring matter. This buff consists of fibrine and albumen; the serum contains more albumen than natural; and the crassamentum is exceedingly firm.

Is this modification of the blood the effect, or a cause, of the inflammatory process? That the blood may be cupped and buffed independently of inflammation, is proved by the facts of the occurrence of these phenomena in cases of pregnancy.

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* Dublin Trans.

It is true, on the other hand, that the buffed and cupped state of the blood is not so obvious on the first day as on subsequent days, in cases of inflammatory disease. It must, therefore, be concluded that inflammation, and the state of pregnancy, and other sources of excitement, and even bloodletting itself, when so conducted as to lead to reaction, induce the cupped and buffy state of the blood.

It is an interesting fact to note, that the layers and adhesions formed upon or from the surfaces of inflamed serous membranes, are of the same chemical and physical constitution as that of the buff of the blood itself.

It is important to remark that it is not every kind of inflammation which induces the cupped form and buffy coat in the blood. Inflammation of the serous membranes and parenchymatous substance has chiefly this effect. Inflammation of the mucous membranes, as bronchitis, and dysenteria, frequently occurs without any disposition to a cupped or buffed condition of the blood. Indeed, there is a greater difference between these two classes of disease than their names would lead us to suspect.

Dr. Tweedie has observed, in two instances of acute disease, the buffy coat on arterial blood. The only reason why this appearance is not so familiar to us is, probably, the less frequent performance of arteriotomy than of venesection.

But besides the marked morbid appearances of the blood in fever and in inflammation, very peculiar changes take place in *chlorosis*. In this disease there is a general state of bloodlessness, the crassamentum is small, the proportionate quantity of serum large; a drop of the blood observed upon white linen is seen to be extremely pale. It still remains to ascertain the exact proportions of fibrine, albumen, hæmatosine, &c. in chlorotic blood, and to observe its appearance under the microscope. It still remains to compare it with the blood of persons blanched by hemorrhagy. The morbid character of the blood in chlorosis must be ranked amongst the most unequivocal proofs of the truth of a humoral pathology.

The next disease to be noticed in connexion with the pathology of the blood is *scorbutus*, the stronghold of the humoral pathologists,—the pons asinorum of the solidists. The defective cohesion and separation of the cruor, the dissolved state of the blood in scorbutus, could never be forgotten by either party; it was continually reproduced by the former, and pertinaciously neglected by the latter.

Dr. Mead gives a vivid description of the state of the blood in scorbutus. 'In the beginning,' he observes (Medical Works, Dublin, 1767, p. 332), 'as it flowed out of the orifice of the wound, it might be seen to run in different shades of light and dark streaks. When the malady was increased, it ran thin, and seemingly very black; and after standing some time in the porringer, turned thick, of a dark muddy colour, the surface in many places of a greenish hue, without any regular separation of its parts. In the third degree of the disease it came out as black as ink; and though kept stirring in the vessel many hours, its fibrous parts had only the appearance of wool or hair floating in a muddy substance.

'In dissected bodies the blood in the veins was so entirely broken, that by cutting any considerable branch you might empty the part to which it belonged of its black and yellow liquor. When found extravasated, it was of the same kind. And lastly, as all other kinds of hemorrhage are frequent at the latter end of the calamity, the fluid had the same appearance as to colour and consistence, whether it was discharged from the mouth, nose, stomach, intestines, or any other part.'

There is no point in pathology more instructive than this of scorbutus. The morbid influence of salt meat, and the curative influence of acids; the baneful effects of impure air and impure diet, and the beneficial effect of a change of atmosphere and regimen; are shewn more clearly in this disease than in any other. And as subsequent links of the chain, the influence of a 'dissolved' state of the blood in inducing a 'dissolved' state of the solids, to use the ancient phraseology, is equally remarkable in this disease.

Nearly allied to scorbutus is *purpura*. Some singular appearances have been observed in the blood in this disease. The crassamentum has been found separated without being firm, or contracted; and buffed without being cupped; its upper surface covered to a considerable depth by a straw-coloured substance resembling ordinary jelly. This, as well as the other parts of this interesting subject, still needs further investigation.

As an improper kind of diet produces a baneful influence upon the composition of the blood, so does a disordered and *loaded state of the bowels*. This is apparent from the condition of the secretions; the saliva, the perspiration, the urine, are alike deranged in their obvious qualities, but especially in odour; and there is more or less of the bloodless appearance seen in chlorosis.

Icterus is another disease in which the blood is known to suffer. The colouring principle, at least, of the bile is retained in the blood. It appears to act as a narcotic upon the brain, inducing drowsiness. The serum of the blood and the secretions from the skin and kidney are in some cases alike tinged with the yellow colouring matter of the bile.

Every one knows the baneful influence of a suppressed state of another secretion—*the urine*. It cannot be doubted that some of the principles of this secretion are retained in the blood. Prévost and Dumas found urea in the blood of an animal in which the ureters had been tied. In the human subject, suppression of the urine, or the presence of some of its principles in the blood, produces coma and death.

M. Dance has recently renewed the idea of a former day, that the suppression of the secretion of milk may, like that of the bile or urine, affect the blood and the secretions. In one such case it is said that caseum was found in the fluid of ascites, evacuated from the abdomen.

But if the secretions become sometimes suppressed, and produce a reflex alteration in the blood, there is a case in which the blood becomes morbidly affected, together with an excessive secretion, as in diabetes. The blood in this disease is more serous, and contains less fibrine than usual. It would be interesting to examine the effect upon the blood of excessive perspiration, undue lactation, and profuse or protracted menorrhagia or leucorrhœa.

The facts which result from this inquiry are these:—1. In many diseases, as fever, inflammation, chlorosis, scorbutus, there are undoubted morbid changes induced in the blood itself; 2. that other morbid changes are induced by impure atmosphere and an unwholesome diet; 3. that various miasmata in the atmosphere, and various poisonous qualities in food, produce morbid changes in the blood; 4. that suppressed secretions induce morbid changes in the blood; 5. that excessive secretions induce other morbid changes in this fluid; and, 6. that an affection of the innervation, or of the nervous system, may, as is observed on a division of the eighth pair of nerves, produce its peculiar changes in the circulating mass."

On bloodletting Dr. Hall is more at home; and his paper in the Cyclopædia is a compendium of his other publications on the same subject. We need not farther allude to them here.

The important article on Cerebral Inflammation, by Dr. Adair Crawford, is noticed separately in another part of the Periscope.

III. Bronchitis, by Dr. Williams, is a well-constructed paper, from which we shall make an extract on the treatment of the acute form of that dangerous and distressing disease.

Treatment of Acute Bronchitis.—1. The slighter cases of acute bronchitis are more frequently objects of domestic than of formal medical treatment. When neglected, however, a common cold may give rise to the most serious complaints; and we are far from subscribing to a prevalent opinion to which even Laennec seems to lean, that it must always run its course. By antiphlogistic diet, and a few simple means calculated to restore the secretions, and, if required, to cause revulsion from the inflamed part, a cold may often be checked in a few days, which if left to itself might run on for weeks, entailing on some subjects other and worse evils. The means which we have found most effectual are as follows:—At the first feeling of the cold, let a purgative be given, with two or three grains of ipecacuanha or James's powder. Let a hot pediluvium be used, the patient getting into a warm and well covered bed immediately after, and promoting any disposition to perspiration by a warm draught of thin gruel, barley water, or any other mild diluent. If perspiration comes on, and the purgative operates well, the cold is sometimes already cured; and it is only necessary to remain at home, and to abstain from animal food and wine next day to prevent a return.

If, however, perspiration do not follow, or if the cough has already come on, the disease generally proceeds, and we must then endeavour to mitigate its severity, and bring it quickly through its course. If the patient cannot, or thinks it not worth while to remain in bed for a day or two, he should clothe more warmly than usual; for the susceptibility of the body is such as to render a very slight exposure enough to keep up the disease, and abstinence from meat and all fermented liquors or spirits is at this period equally necessary. To loosen the cough and lead the bronchial inflammation to the stage of free secretion, small doses of ipecacuanha or tartarized antimony are often most effectual; and, although called a stimulant expectorant, squills, when combined with these, have always appeared to us to exert a beneficial effect: ten minims of the tincture with thirty of the vinum ipecacuanhæ, and six or eight of liquor potassæ, given three or four times a day, seldom fail to facilitate expectoration and relieve the cough. Whether the alkali act by facilitating the absorption of the medicine, or by any specific action on the vessels of the bronchial membrane, we cannot determine; but its effect in increasing the action of expectorants we have proved in a variety of examples. Should nausea be produced, the dose of the medicines may be diminished; and if the cough is still troublesome at night, a little extract or tincture of hyosciamus may with advantage be added.

This treatment is generally sufficient to relieve the tightness across the chest, which yields as the cough becomes loose; but if the case is obstinate, it may be necessary to resort to a blister, or some of the means which we shall presently recommend for the more severe forms of the disease.

The inhalation of the vapour of warm water may be sometimes useful; but we have seen it in some instances increase the oppression; and, from its effect of determining blood to the part, we do not deem it so universally safe a measure in recent bronchitis as it has been represented to be.

With still more force would we object to the cure by spirits or wine, as recommended by Laennec; not that we doubt its occasional efficacy, but from the experience that where it does not cure, it greatly aggravates the inflammation. Towards the termination, when the matter expectorated has become thick and loose, and all febrile symptoms are dissipated, animal food and wine may be indulged in with impunity, and even with advantage. At this period, too, if the disease shows a disposition to linger, much good may often be obtained by using some of the stimulant expectorants, as myrrh, copaiba, &c. and if necessary, the cough may be allayed by opium. This treatment will be noticed under the head of chronic bronchitis.

There are very many remedies which are in common use for coughs, which it is impossible here to advert to. The safest are those which are simply demulcent; many are stimulant and narcotic, and often do mischief. Ipecacuanha lozenges is a remedy worthy to be named, as the convenience of its form recommends it when more formal medicines are objected to; and although it is apt to cloy the stomach before sufficient quantity can be taken, it often proves as serviceable as the less agreeable compounds of the medicine.

2. The danger attending severe acute bronchitis renders far more energetic measures necessary; and these, although generally of the same class as those usually directed against acute inflammations, must be exercised with more than usual discretion and caution.

As long as the phlogistic state continues, with high fever, hard pulse, and great feeling of straitness and oppression in the chest, there can be no doubt of the propriety of bleeding more or less freely, according to the intensity of the symptoms, and the strength of the patient; but it is not prudent, as in pleurisy or peripneumony, to bleed to syncope, or to push the measure with an expectation of very marked relief. From sixteen to twenty-four ounces may be taken at first in severe cases; and the repetition of general bloodletting must depend on the state of the pulse rather than on other symptoms. If it is weak, or if the patient is advanced in life, we must endeavour to subdue the symptoms by less violent means, such as local bleeding and medicines, rather than run the risk of destroying strength that is absolutely required for the act of expectoration.

Cupping is generally to be preferred to leeches, as its effect is more speedy and more within control; and it is of considerable advantage to apply it to the part in which auscultation has discovered the greatest obstruction to the passage of the air.

There is an objection which obtains so against blisters, as to exclude their use in many cases of the early stage of acute bronchitis; namely, that before they rise, they always produce an irritating effect on the whole system, which is very apt to aggravate for the time the inflammation for which they are applied. This effect, however, varies much in different individuals, and in those whose skin easily vesicates under a blister, it is obviated by the serous discharge that immediately succeeds.

In other instances, it is advisable to resort to other counter-irritants, and we give the preference to the tartar emetic. To make it available in an acute disease, we have found it necessary to excite the skin previously to its application, by means of a brush or coarse flannel, by applying a warm hand wetted with ether or camphorated spirit, or by a short application of a mustard poultice. The tartar emetic should then be immediately rubbed in, either in the form of a warm saturated solution, or an ointment composed of one part tartar emetic to two of spermaceti ointment. With these precautions we have rarely failed to excite a full pustular inflammation in as short a time as that required for the rising of a blister, with far less irritation to the system, and with decided relief to the pectoral symptoms. We have reason to believe that a minute quantity of the tartar emetic is absorbed into the system, as we have sometimes observed nausea succeed its use; and this, instead of being injurious, as in the case of cantharides, is a part of the treatment which has been found most serviceable. This brings us to the subject of internal remedies.

At the onset of the disease, the earlier the better, a brisk purgative should be given. Where the inflammation is high, calomel, with a grain or two of ipecacuanha, combined with jalap, scammony, or any of the active cathartics, is to be preferred, and followed by repeated doses of a saline aperient, containing a small quantity of tartarized antimony. This medicine proves useful not only as an evacuant, but as a sedative and diaphoretic, and the nausea, which it sometimes produces, is generally beneficial by modifying the secretion of the bronchial lining, and facilitating expectoration. For the same reason, a full emetic has been generally recommended, and is often decidedly useful; but it is better adapted to children, and to cases in which the bronchial secretion is profuse, than to the more inflammatory forms of the disease.

For the relief of the dyspnœa and cough, those medicines are to be preferred which act on the vascular system. The sensation of dyspnœa is not to be looked on as one merely of discomfort, to be relieved by means which deaden sensibility, but as an indication of the inroad made on a vital function, which, if not restrained, must terminate in its destruction. To aid, therefore, the antiphlogistic measures that we have already recommended, it is proper to administer such medicines as are likely to moderate the action of the vessels and relieve the congested lungs. Tartar emetic, digitalis, and colchicum best answer this indication, and we generally prefer the two former. The tincture of digitalis, in the dose of eight or ten minims, with thirty or forty of the liquor antimon. tartar., three or four times a day, is the form which we usually adopt. Of course it will be necessary to watch the effects of these medicines, and to diminish or discontinue the digitalis if the pulse become intermittent. It will be of considerable advantage to increase the dose of tartar emetic; and if the dyspnœa continue, and the mucous rhonchus in the chest is undiminished, to persist in its use even should it excite vomiting; for its beneficial effects in peripneumony, to which bronchitis, in its severe form, really approaches very nearly, are sufficient to prove its power to restrain effusion and promote absorption. Dr. Badham strongly recommends this medicine in doses 'frequently repeated, and increased till the maximum which the stomach can bear without vomiting is attained.'

Calomel and opium combined, and given in frequently repeated doses, as in other acute inflammations, are likewise sometimes highly beneficial; and we consider that their use is especially indicated, where, as is not unfrequently the case, the bronchitis is complicated with gastro-hepatic disease. The opium should be in smaller proportion than usual, and is, perhaps, most safely given in the form of Dover's powder.

Should the collapsed stage have come on, and the symptoms of debility shew that the function of respiration has been already so much injured as to reduce the excitability of the system, it is necessary to resort to expectorants of the stimulating kind. Of these the best is carbonate of ammonia, which often enables a patient to expectorate what in his weakness might be sufficient to suffocate him. We are disposed to think that this remedy is more than an ordinary stimulant, and acts in an especial manner on the bronchial membrane.

The attenuating or solvent power of alkalies may with advantage be resorted to in the latter stage of bronchitis, when the matter of expectoration is very consistent, and, lodging in the bronchi, occasions local absence of the sound of respiration, and, if copious, dyspnœa. The liquor potassæ, in doses of ten minims, given with the vinum ipecacuanhæ, is productive of obvious benefit.

From what we know of the effects of the lobelia inflata in suffocative catarrh of the chronic kind, we should judge it to be worthy of a trial in the collapsed stage of acute bronchitis.

Besides attempts to relieve the lungs of the load which prevents the penetration of air into them, another indication presents itself in this stage, which is to obviate the bad effects of black blood in the system; for this it is, unquestionably, that gives that peculiarly depressed and adynamic type which precedes the fatal termination. Here, unfortunately, our experience fails us; and we feel the necessity of appealing to further researches of experimental physiology."

The subject of Bronchocele, from the pen of Dr. A. Crawford, concludes the third part of the Cyclopædia of Medicine. We shall notice the other parts in our next Number, while we strongly recommend this work as by far the best —indeed the only good work of the kind in the English language. It promises, in fact, to be a national concern.

LXXXI.

Cases of Entero-Vaginal Hernia,*

Entero-vaginal hernia has in a few cases been gradual in its formation, but in the majority it has suddenly followed some exertion, strain, or shock. The first case on record was related by

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* Dr. Davis's Principles of Obstetric Medicine. Part VIII.

M. Garengeot, in the Memoirs of the French Academy of Surgery. As this is a rare yet important affection we shall give an abstract of some of the more interesting cases reported by Dr. Davis.

Case 1. The patient was the wife of a costermonger, of middle stature, who had borne five children, all large. About a month after her last confinement she made an effort to assist in lifting a load on the shoulders of a porter. At the instant of that effort she felt a derangement within the abdomen and an acute pain in the vagina, of which also she had a sense of great fulness. She consulted her midwife, who told her that she had a bearing down of her womb, and that she must place herself under the care of a surgeon. She however neglected this advice, and continued to busy herself with her ordinary affairs for some time subsequently. The descent into the vagina became so considerable that it manifested itself at the external orifice, beyond the level of which a tumour protruded about a finger's breadth. The patient felt from time to time pains of an internal spasmodic character, which seemed to take their origin from that part, as also pain of the stomach with sickness. Moreover, she was not able to void her urine except in the position of lying on her back. Informed of these particulars, M. Garengeot discovered on examination a whitish tumour, which not only occupied the vagina, but which projected beyond the labia pudendi in such a manner as to admit of the introduction of a finger between it and the vaginal parietes posteriorly. On passing his finger beyond the tumour in that direction, he could feel the orifice of the uterus occupying very nearly its natural situation: whence he concluded that that organ was not implicated in the existing mischief. He also found that the pressure which this examination caused to be made on the tumour, which indeed was unavoidable, had the effect of reducing it to about one half of its previous size. Such a change in the size of the tumour excited at once the suspicion that it consisted in a descent of intestine. With that impression on his mind he placed the patient in a lying position on her bed, and applied the taxis to the tumour with the utmost accuracy of attention. Whilst this operation was performing, he felt its contents as if receding through the superior and right lateral portion of the vagina: and after the retrocession was effected, it was left soft, relaxed, thin, and imperfectly occupying the space which had been previously occupied by the visceral protrusion. In order to strengthen his conviction that the case was one of entero-vaginal hernia, of which however he had never heard before, nor known any author who had described it, he desired the patient to get up and walk, and also to cough strongly. These movements caused the tumour to present itself immediately again. That circumstance served to establish M. Garengeot's conviction that it was actually a hernia. He effected its reduction a second time, and desired the patient to keep her bed until he should be able to supply himself with a suitable pessary. After some failure on this point, in the first instance, a well-adapted contrivance was at length applied, which had the effect of preventing any future descent so completely, that the patient never afterwards sustained any inconvenience from it.

Case 2. In the former case the recent confinement might seem likely to predispose the patient to the occurrence of such a hernia, but in the following there was no such apparent cause in previous operation.

A young woman, of good health and tallish stature, married at the age of twenty-four. Soon afterwards, having to walk along the unboarded joists of an unfinished house, she fell between them, and was precipitated with her face downwards on a heap of boards on the floor below. The face and temple were contused and she fainted for some time. On recovering her recollection she felt intense pain of the parts within the pelvis, referred more particularly to the bladder, and aggravated by the erect position. She thought that her bladder was ruptured, and could pass no urine when she attempted to do so. About two inches on the right side of the navel there was a lacerated wound, and contusion in the right flank. She was seen by Dr. Davis about three hours after the accident. She was in a state of great excitement, complained of great pain in the region of the bladder, with incapacity of passing her urine, any attempt at which was attended with great increase of the pain, tremendous bearing down, violent retchings, and painful gaspings for breath, which had more than once terminated in syncope. There had been a considerable discharge of pure blood from the vagina. On making an examination per vaginam, the region of the bladder was extremely tender to the touch, particularly in the space immediately anterior to the vaginal part of the uterus. No laceration was discovered, nor any sort of tumour or protrusion, but on making a second examination, during which the patient was seized with vomiting, an intumescence of such magnitude as very nearly to fill the upper and middle part of the vagina, soft and elastic, was found to proceed from the very termination of the vagina superiorly, intermediately between that part and the anterior lip of the uterus. The vomiting continued during the examination, and the swelling was exceedingly tense and painful.

Thinking that this tumour was the lacerated or displaced bladder, Dr. D. introduced the catheter without meeting any impediment, and drew off twenty ounces of bloody urine. This produced no relief, the vomiting indeed became more severe. The true nature of the case was suspected, the patient was again placed on her left side, with her breech raised and brought to the side of the bed, and by slow degrees the whole of the left hand was introduced into the vagina. Cautious and gradual pressure was made upon the tumour which was reduced in about a quarter of an hour, a gurgling noise accompanying the return. The mucous membrane of the vagina had not been ruptured, but formed an investing coat to the hernia, which had protruded at the part already mentioned. Towards this Dr. D. "bundled up" every fibre of tissue which might possibly be the remains of a hernial protrusion, and having procured a piece of fine sponge he employed it as a pessary, and found it answer extremely well.

The patient was now in a state of exhaustion, with very frequent small incompressible pulse, some disposition to vomit, great tenderness of the hypogastrium, and still some hæmorrhage from the vagina. In consultation with Dr. Sims, our author abstracted twenty-eight ounces of blood which produced deliquium, followed by marked relief. Leeches to the hypogastrium, a pill of calomel and opium every two hours, and strict quiet followed. We need not pursue the details of the case, suffice it that no more active means were required though judicious treatment was still necessary. A passage through the bowels was procured on the next day, and no further abdominal symptoms ensued. It was necessary to use the catheter for a fortnight, and the urine remained bloody for several days. The sponge pessary was withdrawn daily, and a fresh one imbued with a strong solution of alum substituted for it for about three weeks. Then, when the injured part of the vagina was pretty free from pain, a very light, hollow, and perforated wooden pessary, of nearly cordiform shape was substituted for it. This was withdrawn and re-applied daily for the first week, and after that left permanently in the vagina, without the riband, that the patient might not remove it herself. The pessary was discontinued after having been worn for four or five months, but sponge pessaries gradually reduced in size were continued for a few weeks longer. The patient was perfectly cured with the exception of a slight difficulty in micturition which has since remained, and she is now the living mother of several children.

Entero-vaginal hernia has been more frequently observed in the posterior than in the anterior chamber of the pelvis.

Case 3. An unmarried female, æt. 30, had been subject for many months to an excessive degree of costiveness, requiring great efforts in the expulsion of the fæces. During one of these efforts she suddenly experienced acute pain in the pelvis, extending to the left iliac region. It was violent for a moment, but afterwards continued with intermissions. Three weeks after this the patient discovered a swelling within the sinus pudendi, which increased and protruded from between the labia. She now consulted M. Hoin, who at first felt doubts as to the nature of the case. He found the tumour more distended and prominent when the patient was seated than when lying down, that it protruded half an inch beyond the level of the labia, extended about three inches within the vagina, and occupied its left side and rather posterior part. It was not large, nor was it painful except on firm pressure. By firm pressure it was reduced with a gurgling noise, leaving the vaginal parietes loose and bagging, but not so thin as in the preceding cases. Thus the hernia would seem to have occurred in this case between the uterus and rectum, in the former between the uterus and bladder.

Case 4. M. Leoret, in 1747, examined a case of intestinal hernia which occupied the left side of the vagina. The subject was an unmarried woman who had died idiotic. The tumour occupied nearly the whole of the vaginal passage; its reduction was easily effected. On opening the body the hernia was found to be one of the sigmoid flexure of the colon, and the acetabular portion of the ileum was much lower on the hernial side than on the other. The fundus of the uterus was directed obliquely towards the left side of the pelvis, its orifice towards the right.

"But it is much more important in practice to establish the proper distinctions between hernial protrusions of intestines into the vagina and other kinds of tumours occupying the same passage, than between the several varieties, at least in their simple forms, of such protrusions themselves. It might be very possible for a practitioner not much experienced in matters of this kind, to mistake, for instance, a case of hernial descent for prolapsion of the vagina. The practical result would of course be, that he would content himself with merely introducing a pessary into the vagina, without previously effecting the reduction of the hernia; and of such a blunder the consequences it is obvious might be very serious. A woman had for some years been the subject of an entero-vaginal hernia, which occupied the vagina anteriorly. She had sought no remedy, because she had considered her case to be one of simple bearing down of the vagina. She was, however, at length induced to consult M. Hacnel on the subject. That gentleman at once recognised the nature of her malady, and by an adroit adaptation of a sponge pessary to it, AFTER PREVIOUSLY REDUCING THE HERNIA, effected a speedy cure of it. Gunz de Herniis libellus, p. 84, et seq. The same author refers, however, to another history, where a mistaken diagnosis in a case of the same kind, suggested an operation which proved fatal to the patient. 'A woman was the subject of a tumour which occupied one side of her vagina, and which presented itself at the orifice of that passage. She consulted a surgeon, who, it was believed, mistook it for an abscess, and plunged his bistouri into it. The incision was immediately followed by a protrusion of the cæcum, and of a great part of the colon, which were strongly propelled through the incised aperture by the involuntary efforts of the patient, increased no doubt at the moment by the pain from the infliction of the wound. The protruded bowels were not attempted to be reduced. Gangrene of course supervened, and the poor woman died.' Prof. Gunz. loco citato."

Several other cases of entero-vaginal hernia are related from the work of Sir Astley Cooper; we need not notice them. But this sort of hernia may occur in complication with pregnancy, and the practitioner may inquire how such a case is to be managed. The following instance which occurred to

Dr. Smellie, and is detailed by him, will shew the most successful mode of procedure.

Case 5. In the year 1731, Dr. S. was called to a woman who had felt a swelling on the left side of the anus, which had gradually increased. It disappeared in bed but returned when she rose. It continued down all the time of her first labour, inflammation and strangulation of the intestine having occurred, and prevented reduction. She had a large discharge of blood after delivery; and, with the assistance of fomentations, the hernia was now returned. In the next labour, the intestine was again forced down. The progress of the labour was early and rapid; but before the head of the child had descended into the pelvis, Dr. Smellie was enabled, by passing his hand into the vagina, and pushing the head above the os sacrum, to reduce the hernia. The membranes were ruptured by the operation, the waters discharged, the head forced rapidly down, so as to occupy the space before tenanted by the tumour, and the patient was safely delivered.

In a case which occurred to Dr. Ross, at St. George's Hospital, and was by him transferred to Dr. Smellie, the hernia inflamed, and ulceration, apparently into the intestine, took place. Immediately on this the gut went up, and for some time remained so, and the patient recovered. Subsequently it descended again, in consequence of over-exertion, and the patient again became pregnant. The tumour was reduced during gestation, and the patient was safely delivered at the full time. She died soon afterwards of small-pox, and no examination appears to have been made, a circumstance certainly to be regretted.

From the foregoing cases, our readers will readily perceive the general symptoms, characters, and course of utero-vaginal hernia, the dangers to be dreaded, and the most appropriate treatment, both at the time of its occurrence, and subsequently to prevent its re-appearance. There are some other complications of this affection, which we may notice on another occasion. We think that this work of Dr. Davis's is likely to prove very useful, not only to gentlemen engaged in obstetric practice, but also to those occupied with other divisions of professional pursuits. Yet we cannot refrain from objecting to the diffuseness of the style, the almost interminable length of many of the cases, and the tiresome introduction of circumstances, quite irrelevant to the subject, which defaces most of them. The work, in its present fashion, might be extended, for any thing that we can conceive to the contrary, to a goodly number of volumes. Dr. Davis's resources may be great; but he must not, therefore, imagine that a book is rendered more pleasing, or more instructive, from being unnecessarily crowded with a multitude of facts differing little from each other, and those facts enveloped in such a shell of verbiage, that it is equally difficult and laborious to crack it. The object of Dr. Davis should be to select, abridge, condense his matériel, not to expand it, nor suffer it to expand. We make these observations with good will and good intentions towards the able and most industrious author, and we trust they will be taken in equally good part. We are sure that it will be both for the advantage of his work and for his own, to attend to the suggestions we have made.

LXXXII.

HACKMAN ON SOFTENING OF THE SPLEEN.*

We know but little at present of diseases of the spleen; and what we do know relates rather to the changes observed in the bodies of the dead, than the symptoms of those changes in the living. Here is a pregnant negative instance of the value of physiology. Symptoms are merely alterations of functions or of structure; we recognize diseases of parts or of systems concealed from sight, by functional disturbances—we determine diseases of more external organs by aberrations from their healthy physical structure. But we know not the function of the spleen in health, and how should we recognize the alterations of that function in disease? In fact we cannot do so; and probably our impotence on this point will be perpetual. If the spleen be so altered in structure, enlarged for instance, as to afford physical signs of its disease, we can and frequently do detect it; but we neither do, nor do we believe that with our present amount of knowledge we possibly can, go much farther than this. We remember a remarkable case in point. A young man laboured under symptoms of a very dubious character. He had symptomatic fever, and yet it was difficult to determine of what the fever was symptomatic. Nothing amiss was discovered in the chest, nor in the head, nor in the abdomen; and yet the functions of the viscera of all these cavities were obviously disturbed. We believe the patient complained of pain in the region of the stomach and had vomiting. Many gentlemen saw this patient, but no two agreed in their opinions; and whilst the Doctors were differing, he died. On examining the body, the spleen was found full of tubercles, advancing or advanced to suppuration, and no other lesion was discovered.

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* Hecker's Litterarische Annalen der Gesammten Heilkunde; Med. and Phys. Journal, 1832.

But a good practitioner is not he who merely knows what is generally known, or remembers what has been written since the ancient Greeks, unlike the modern European descendants of the Goth and the Hun, made a deity of their physician. A good practitioner is he who reasons and compares, who remembers what he has seen, and calculates probabilities. By this process of reasoning and comparison new avenues of information are opened to us, and when we cannot get certain knowledge, we obtain inferential. If, for instance, a patient is presented to us with symptoms of a grave character, yet without those signs which are known, by observation, to indicate alterations of the more important organs, the judicious practitioner will be led to suspect affections of parts not so prominent in their actions, not so obviously essential to life, yet carrying destruction with their diseases. As a matter of experience, we know that long-continued intermittents are often accompanied with alterations of the spleen, and from this knowledge we derive much assistance. We also know that, in certain epidemic pernicious fevers, the spleen undergoes more perceptible alterations than other organs. From facts of this kind, no certain good appears at first sight to spring; and yet, when considered, they afford much useful knowledge. We see that in fevers, in stages of which the blood leaves the surface and collects at the centre, the spleen is liable to suffer; in fact, that abdominal congestions form, perhaps, the most prominent causes of splenic disease. The spleen is essentially a viscus of blood-vessels and blood, and accordingly we find its chief alterations in those states, in which the blood itself appears to undergo some alteration, as it does in the congestive fevers, whilst it suffers mechanically from the mere congestion, as in simple intermittents. In the former class of cases, we generally observe softening of the spleen, in the latter, unnatural growth. The diseases of the spleen, independent of these, are, on the whole and in comparison with those of other organs, few. This brings us, then, to the consideration of Dr. Hackman's observations on softening of the spleen.

"Affections of the spleen form a considerable proportion of the disorders peculiar to women; but in low and marshy countries, whether towards the tropics or the poles, they are much more common than with us, and are known as the sequelæ of ordinary intermittent and remittent, and also of yellow fever. The regions most remarkable in this respect are the borders of Denmark, East Friesland, the island of Walcheren, La Vendée, several districts of Hungary (especially Bannat), and many parts of upper and middle Italy, and, among others, the Pontine marshes and the Campagna near Rome: to these may be added Minorca, South Carolina, Bengal, &c. Of the diseases of the spleen common in the above-named countries, Ramollissement must not be overlooked. The generality of works, however, on the pathology of this organ scarcely mention such a state, and even HESSE himself dismisses it very briefly in his excellent treatise on Ramollissement.

Softening of the spleen is sometimes sporadic, but more frequently it is either epidemic or endemic: in the latter cases it is intimately connected with other diseases which are in themselves epidemic or endemic likewise. *Splenomalacie* is frequent, not only in the human subject, but is common also among animals, especially among the ruminantia. When sporadic, this affection follows sporadic intermittents; when epidemic, it accompanies epidemic fevers in hot and marshy countries. In the last epidemic which ravaged the north of Germany, softening and hypertrophy of the spleen were phenomena so constant, that Dr. DOHRN even ventured to call the disease *splenitis epidemica contagiosa.* Fevers in Sardinia likewise often terminate in softening of the spleen; this lesion, however, is always the effect of a more general disease; at least the author has never met with an idiopathic case.

According to the opinion of Hachmann, softening of the spleen depends upon over-congestion, or venous inflammation, of which there are two stages, one of irritation or congestion, and one of true ramollissement. The symptoms of the first are, fever with gastric disorder predominating, but of which the type will vary, according to the season, the climate, or the constitution of the patient. In hot and marshy countries, or even in more temperate parallels during the summer, the access of fever is preceded by an ordinary shivering, but the intervals are so slight that it might perhaps be considered a remittent. The rigors, which vary in duration and intensity, are followed by a burning heat, after which a profuse perspiration prevails. At the beginning of the attack, the patient vomits a clear fluid, often mixed with bile; which ejections continuing during the cold, cease on the access of the hot stage, and recur with the recurrence of each fit. In northern climates, these symptoms diminish as the disease advances; while, in tropical countries, they continue unabated, as the black vomit of the yellow fever will witness. Hæmatemesis only occurs in chronic cases of spleno-malacie. Another essential symptom of this disease is precordial distress marked by similar exacerbations and remissions with the fever, and which probably depend upon the compression of the diaphragm by the enlarged spleen. This symptom is never entirely absent in any case, and sometimes it is developed in so great intensity as to become truly *orthopnœa.*

Of other diagnostic signs of this disease the principal are, great lassitude, pains in the limbs, vertigo, flushed face and eyes, and great thirst, (which, if satisfied, increases the præcordial pain;) the tongue at first is of a pale red, and covered by a yellowish fur, by degrees it becomes of a bright red, and cracks; but it remains generally moist, and is often studded with aphthous eruptions. The abdomen is swelled, soft in the umbilical region, but not tender, pain being only felt when the body is bent and pressure made towards the stomach or spleen. In the epigastrium, a very sensible pulsation may be perceived; and as the disease advances, this pulsation extends also to the region of the spleen. Most frequently the fever is ushered in by diarrhœa, (ten or twelve evacutions in twenty-four hours;) the matter passed being dark coloured, greenish, watery, and very fetid. It is during the febrile exacerbations that the stools are most frequent; and this circumstance, joined to the vomitings, gives to the disease an appearance of cholera. The patients are excited, they sleep but little, wander much, and become delirious; the pulse is variable, at first full and soft, afterwards becoming small and very frequent; sometimes, however, it does not vary much, but remains slow, and occasionally intermitting.

The stage of ramollissement seems to be shewn by a great collapse, and the access of typhoid symptoms, and death ensues as in cases of fever, or follows a state of coma resembling apoplexy. This apoplectic state is a phenomenon that frequently occurs in ramollissement of the spleen.

The progress of *spleno-malacie* is, in general, rapid, like that of the fevers of which it is the result: thus, ramollissement may take place in the course of eleven or twelve days. Still the disease may assume a chronic form, as two cases recorded by BONET and PORTAL, and one observed by the author, have sufficiently shewn.

There are different degrees of ramollissement: in the first, the spleen is gorged with blood of a black or dirty brown colour, amongst which the reticular tissues cannot be distinguished; the structure is more friable than when in a healthy state, and pressure will discharge a great quantity of dark-coloured blood, so that there will remain nothing but a sac containing black blood, and a soft matter resembling chocolate.

In the more severe forms of ramollissement, the spleen bursts spontaneously, without any previous violence, during the life of the patient, and the matter escapes into the abdominal cavity, when death speedily ensues. The volume of the viscus thus softened is not always much increased, but most frequently the bulk is considerably augmented if the individual has suffered from endemic intermittent or remittent fever.

Of the mode in which ramollissement of the spleen is effected nothing more is known than of ramollissement in general; however, most pathologists agree that such morbid alterations result from sanguineous congestion and inflammation, disorganising the viscus, and ending in gangrene.

Towards the conclusion of his memoir, the author relates eight cases of acute spleno-malacie, extracted from the writings of HEUSINGER, GROTANELLI, MONTFALCON, and BAILLY, and one chronic case which fell under his own observation."

LXXXIII.

AUSTRIAN STRICTNESS IN DISCHARGING SOLDIERS.

IN Mr. Marshall's excellent work on the enlisting, discharging, and pensioning of soldiers, lately published, we are informed of the method adopted by the Austrian government in the discharging of their men. In countries like Austria, where the government is despotic and supported in a great degree by the bayonet, it becomes a matter of imperative necessity to reduce their armies to mere machines, powerful it is true, but flexible to the will or caprice of the despot of the day. For this purpose discipline must be carried to its utmost extent, and the soldier must be drilled into his military duties till he scarcely comprehends the existence of any others. We dare say that this discipline is sufficiently irksome, at least to many, and that attempts are consequently made by malingerers to retreat from the service. However this may be, it is certain that the utmost precautions are adopted to prevent the success of any such schemes, and the man who has sufficient wit to slip through the scrutiny which is adopted, must be a malingerer of the first water.

"In the Austrian Military Service, there is a medical practitioner attached to each troop or company of a regiment. This class of officers is not authorized to propose disabled soldiers to be discharged without the sanction of a "*field-surgeon,*" who decides upon the cases of the men alleged to be disabled: in the performance of this duty he is, from his office, denominated the *Arbitrium.* For the purpose of dividing the responsibility in this important duty, the Arbitrium is associated with a military officer of a rank equal or superior to that of the persons about to be examined. When non-commissioned officers or privates are examined, the field surgeon is associated with an officer of the troop or company to which the men respectively belong; when a subaltern or a captain is to be examined, he is associated with an officer of equal rank with the individual alleged to be disabled. If a staff-officer is to be examined, the Arbitrium is associated with a general-officer. Officers, of whatever rank, who may be employed on this duty, are individually responsible for the accuracy of their reports of the cases of the men who are submitted to their examination. These cases are to give a detailed account of the origin and progress of a man's disease or disability, and the means which have been employed for his recovery. When an alleged disability is not obvious, such as in the case of disease of an internal organ, or when it is periodical, a great body of competent evidence is required to establish the allegation of a man's invalidity. After the men have passed the *Arbitrium*, or first Board, they are brought before a *Super-arbitrium*, or second Board, which is assembled by order of a general officer. The super-arbitrium is allowed three weeks to perform this duty, for the purpose of affording time to collect evidence, or otherwise to acquire satisfactory information regarding doubtful cases. The men who are examined by this Board, are divided into three classes, namely, *completely disabled*, *half disabled*, and *temporarily disabled;* in other words, unfit for service, fit for garrison or reserve duties, and cases who may recover by medical treatment. Malingerers are severely punished. Sometimes they receive corporal punishment, and at other times they are sentenced to serve for life. Invalids who have been discharged are not exempted from the surveillance of a general-officer, who may summon them before him, and if it be found that they have regained their health and efficiency, he may erase their names from the list of pensioners. The Arbitrium, and the Super-arbitrium, are both held responsible for whatever errors they may commit, and they may be called upon to refund the amount of any expenses that have thereby been incurred."

MORTALITY OF YOUNG RECRUITS IN HOT COUNTRIES.

It requires no great penetration to foresee that the young are not those who are likely to bear hardships best. Manhood is the period of vigour corporeal and constitutional, and this has been proved to a remarkable degree in our Indian armies. Dr. Burke, Inspector General of Hospitals dwells very strongly on this point in his Medical Report of the King's Army in Bengal.

"The period of life for the young soldier coming to India should be, for the youngest, the age of formed manhood, and when his habits have been fixed. He should, moreover, have been drilled before coming to this climate, in which so much is unavoidably suffered by the fatigue which the young soldier must undergo in learning the first parts of his exercise. In short, the soldier should arrive here at the age and period when he can be of the greatest use when called upon for active service. That youth should ever be the proper time, the records of every corps here disprove the assumption. The coming to India at the mature age of twenty-five or twenty-six, or full grown manhood, having been found the most favourable to health and less so to disease in India—that I conceive to be the period of life which should be fixed upon as the most proper for sending out young soldiers to this country."

A regiment arrived in India in 1823. It was then 653 strong, and had received in the course of six years 1525 recruits and volunteers from other regiments leaving India. During the years 1824 and 1825, the regiment was employed in the Burmese territory. By a table it appears that, in 1824, the ratio of mortality among the young men who went out with the corps was 38 per cent, or 1 in every 2½; while among the volunteers who were considerably older, the mortality was 17 per cent, or 1 in 6. In 1825, it was 30. 5 per cent. or 1 in 3¼ among the former or younger class, and only 6 per cent. or 1 in 16 among the latter or older. In 1826, the total strength of his Majesty's Army in Bengal was 7712, of whom 15 per cent. were under 20 years of age. Since that period the age of recruits has been a subject of consideration with the government, and no regiments serving in tropical climates enlist recruits under the age of twenty, a very humane and wise regulation.

"The French admit healthy and robust volunteers under thirty years of age into the service, and soldiers are allowed to re-engage until they are thirty-five; should they, however, have passed the age of thirty, they will not be received into any other branch of the service than the one in which they had formerly served. The greatest duration of voluntary engagements in the French service is eight years. In services such as ours, where recruits engage for an unlimited period, it is of peculiar importance that men should not be enlisted at an advanced age. Experience tells us that an extremely small proportion of the men of the British army serve beyond the period of forty years of age, probably not above 4 per cent.; hence it would be a measure of economy, as well as a means of contributing to the efficiency of the army, not to enlist men above twenty-five or twenty-six years of age. But there is another consideration which ought not to pass unnoticed. A great number of the men who wish to enlist after twenty-six years of age are dissipated and profligate characters, or they are persons who have been unsuccessful in business, broken-down gentlemen, &c. &c., and, on account of these causes, are frequently disqualified for the army. It is of importance that the point of excellence, in regard to the age of recruits, should be appreciated and recognized; which being once carefully fixed, the limitation may be enlarged or contracted according to the wants of the service. A measure may be expedient, although it be not the best which might be devised."

MALINGERING.

Many very curious examples of the ingenious knavery, and knavish constancy of malingerers have been at different times recorded. The game is probably more difficult now than it was formerly, and few are able to elude the well directed vigilance of our present medical officers of the army and navy. The following are amusing instances of the systematic attempts at deception practised by men anxious to obtain their discharge from the service.

Many have entirely destroyed one eye in order to obtain the pension of ninepence per day which government allotted to them. It was proved before a committee of the House of Commons, that in a barrack where several hundred cases of inflammation of the eyes occurred, a large proportion had been occasioned by the introduction of gonorrhœal matter into the eye. As soon as a regiment is ordered to the West Indies, disease of the eyes very frequently appears among the men, and continues till the corps has embarked. The number of cases in the depôt then decreases, and no more is heard of it till the period for embarkation comes round again.

"Among numerous instances of strong presumptive evidence of the existence of factitious disease of the eyes which have come to my knowledge, I shall adduce the following:—Early in the year 1827, several severe cases of inflammation of the eyes occurred in —— regiment, which was then employed in this country, and about the middle of July the disease became very prevalent. From the commencement of the affection, strong suspicions were entertained that it was artificially excited; none of the officers or children were affected with it, and but one woman. Only three non-commissioned officers were admitted into hospital, although men who had been reduced on account of misconduct, seemed to be particularly liable to the affection. Change of quarters had no influence in arresting its progress; various means were adopted with a view to discover whether or not the disease was factitious, and kept up by artificial means. The men were repeatedly removed, without warning, from their beds in one ward to another, and the first ward minutely examined for the purpose of discovering whether they had any irritating substances calculated to produce inflammation of the eyes concealed among the bed-clothes or, elsewhere. Small parcels of snuff, tobacco, and salt, were found in or close to the beds of several of the men, and it was presumed that the patients had been in the habit of introducing these substances between the eyelids. Low diet, confinement to bed, and similar measures, seemed to have no influence in facilitating recovery, or in diminishing the number of new admissions. With the view of preventing the patients from having access to their eyes, some head-pieces of tin plate were constructed, which, when put on, could be secured by means of a lock and key. These machines were procured during the Autumn of 1829, and, by their judicious use, the progress of the epidemic was arrested.

From the commencement of the epidemic, till the 24th of October, 218 men, (not admissions only,) were received into hospital on account of inflammation of the eyes. Thirteen lost each an eye, eight that of the right, and five that of the left. Four have been discharged from the service, and nine are doing duty. At present, (24th of October,) there are only four cases of eye diseases in hospital."

With the following rather ridiculous instances of the detection of impostors we conclude.

During an alleged paroxysm of epilepsy, where imposition was suspected, Mr. R. exhibited seven or eight drops of croton oil through an opening left by the loss of two teeth, and in a few minutes the man started on his feet and ran to the water-closet.

A soldier belonging to —— regiment said he had lost the power of his right arm, but, from the absence of any physical evidence of disease, the medical officer considered him a malingerer, and tried various means to induce him to return to his duty, but without success. With the view of intimidating him, a proposal was made to amputate the arm, and, in prosecution of this end, an unusual degree of solemnity was observed on the occasion. All the surgical instruments which could be mustered were displayed: but nothing daunted, he allowed himself to be conducted to the chair preparatory to the operation. The tourniquet was put on, and the amputating-knife placed under his arm ready to make the first incision. He sat unmoved. The surgeon was puzzled, and made the best excuse he could for postponing the operation. Being, however, still impressed with the opinion that the arm was not disabled, he resolved to attempt another means of conviction. He recommended change of air for some of his patients, and among others the alleged case of palsy. To reach the place announced for the accommodation of the sick, it was necessary to cross the —— river in a boat. The party embarked, accompanied by the surgeon, who, by a preconcerted signal, directed the boatman to throw the man in question, who was a good swimmer, into the river. After a little time he seemed to be much exhausted from the exertions necessary to keep him afloat by means of his left arm only. The surgeon became alarmed, and had resolved to take his patient on board, when he uttered an oath, and struck out vigorously with both arms. The conviction was conclusive.

LXXXIV.

IODINE FOR SECONDARY ERUPTIONS OF SYPHILITIC ORIGIN.*

MR. MAYO appears to be making some experiments with iodine. The form in which he exhibits it is the following. ℞. Tr. iodinæ, ʒj. Potassæ hydriodatis, ʒss. Syrupi papaveris, ℥ss. Aquæ menthæ viridis, ℥viij. ad ℥x. This quantity to be taken by adults during the twenty-four hours; a less quantity by children. If Mr. Mayo begins with this dose, we should imagine that at some time or other he will find it produce deleterious effects. We have seen very severe constitutional disturbance from less quantities, begun too with more caution than Mr. Mayo seems to employ. Mr. M. has only found iodine beneficial in cases of bronchocele and in some affections of the skin of syphilitic origin. This is no novelty. Mr. Brodie has employed it in the treatment of secondary symptoms for some time, and we saw two patients so treated in St.

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* Med. and Phys. Journ. June, 1832.

George's Hospital last year. If our memory serves us they left the hospital too early to enable a conclusion to be drawn as to the result. We have seen iodine employed in one or two other cases of secondary symptoms, but we confess without much advantage. In the following cases more benefit appears to have been derived from it.

Case 1. John O'Shaughnessy, æt. 32, admitted in the Middlesex Hospital in January, 1831. There was a large superficial ulcer on the instep, in great part covered with healthy granulations, but with a yellow phagedenic edge and a narrow bright red line upon the skin around it; there was a similar ulcer on one shoulder, and several large leprous spots on the limbs and body. He stated that in the preceding August he had contracted a chancre with bubo, for which ptyalism had been procured by mercury, with the effect of healing both chancre and bubo. As far as his recollection served him the throat became ulcerated about five weeks after he commenced the mercury and while he was still taking it; on one occasion he lost by a sudden hæmorrhage nearly a quart of blood. Copper-coloured spots followed by ulcers afterwards appeared upon his body, and he believed that mercury was then discontinued, and that he took sarsaparilla, under which he mended.

Mr. Mayo put him on sarsaparilla with liquor potassæ. The ulcer on the instep healed, but he lost strength, and the skin became covered with blotches and ulcers. The blotches at first resembled lepra alphoides, but soon each spot became tubercular, and, in place of the thickened white patch of cuticle, a crust formed, below which was an ulcer. There were many of these on the limbs, body, face, alæ nasi and lips, where they occasioned a profuse ptyalism; there was a small depôt of serous fluid in the calf of the right leg; there was no affection of the bones. Many means were tried with temporary amendment. Blue pill and nitric acid did decided mischief. In December M. Magendie suggested to Mr. Mayo the use of iodine. Its effects, after a few days use, were striking; the skin was less red and heated, several of the crusts separated, and the ulcers looked healthier. The remedy has been persevered in to the present time with interruptions of a fortnight on four different occasions. The patient is "all but entirely" recovered.

Case 2. John Baxton, æt. 31, was admitted with ulcerated throat and face, and pains and tenderness of the head. These pains began in a venereal sore and course of mercury. It is now two years since the forehead became at two points puffy and tender, then red, and broke. Ulcers formed on the forehead, eye-brows, and bridge of the nose, round which the skin was red and thickened; they spread after healing where they began and extended over a fresh surface. Many plans were tried and all ultimately failed. The decoctum smilacis asperæ at one time, and a mild mercurial course at another, produced most benefit. The patient began the iodine at the same time with the subject of former case. He has entirely recovered, the ulcers having gradually healed, and the adjacent skin having lost in a great degree the redness and tumefaction.

These cases are calculated to encourage practitioners in making trials with iodine in that miserable class of secondary symptoms, where a definite character is lost, where, from mismanagement or some peculiarity in the original poison or in the system which received it, the case is neither strictly syphilitic, mercurial, nor cachectic, but a villainous compound of all. Every now and then we see a wretch in the General or Lock Hospitals, covered with blotches, frequently in combination with destruction of the nose or of the throat, perhaps with carious vertebræ, or with laryngeal affection, and his limbs distorted by chronic thickenings of the periosteum. Such a miserable creature is driven from pillar to post, from sarsaparilla to the oxymuriate, from the oxymuriate to the smilax aspera, from this to inunction, and too often the effect of all this treatment is to place him in a more pitiable condition than before, to make the case such a composite thing that no art can unravel it, and death from phthisis, serous inflammation, or some casual attack of erysipelas, destroys at last the unhappy victim. If iodine should prove of benefit in such cases, it will be well; but it will need many trials and much discrimination to determine its real powers, and to ascertain the circumstances favourable to the development of its good effects.

LXXXV.

Westminster Ophthalmic Hospital.

A quarterly return of the patients treated in and at this hospital has lately been made to its governors and friends. It shews the number of applicants on the increase, and the only source of regret that it presents, is the circumstance of the inadequacy of the funds to confer all the benefit that could be wished and is solicited. Those funds, however, are now on the increase, and we trust will yet be greatly and sufficiently augmented.

The results of the treatment of the patients that have attended during the period included in the return, have been highly satisfactory; and, by a reference to another part of this report, it will be seen that the treatment adopted in the severest form of purulent inflammation of the conjunctiva, gonorrhœal ophthalmia, has proved as successful as heretofore. In none of those instances where infants have been brought labouring under purulent ophthalmia, prior to disorganization of one or more of the textures of the eye, has there been an unfavourable result. But parents not unfrequently apply with children, who, from neglect, have lost one or both their eyes by this complaint. Since January, children have been brought to the hospital under these unfortunate circumstances.

The cases of catarrhal inflammation have been successfully treated by the early or immediate use of stimulating applications, conjoined, in those instances which seemed to require them, with the application of leeches, or the abstraction of blood by cupping; but the cases requiring such local depletion were not numerous.

In the treatment of inflammations of the cornea, terminating in, or rather causing, interstitial abscess, the exhibition of mercury has been chiefly relied upon. In some cases, where constitutional symptoms demanded it, quinine has been advantageously combined with it. Matter effused into the anterior chamber, and constituting "hypopium," has, in all the cases, been absorbed under the use of the mercury; and local stimulants were resorted to for the treatment of the superficial ulceration of the cornea. All these cases but one ended favourably. In that one instance, ulceration penetrated the cornea, the iris protruded through the ulcerated aperture, and loss of vision is the consequence, the eye being staphylomatous. This is mainly to be attributed to the careless conduct of the parents of the child, in not bringing her to the hospital, so that the proper plan of treatment could not be pursued.

Ulcers of the cornea have been treated by the use of solutions of the nitrate of silver, the ointment of the same, and, in some instances, the application of that caustic in substance. The granulated state of the lids, the result, most frequently, of erysipelatous inflammation, has been treated by the application of the sulphate of copper in substance, rubbed over the granulated surface. Many of these cases, necessarily tedious from their nature, have, however, given way under this method, and the irritation resulting from the condition of the conjunctiva has thus been removed.

Among the patients presenting themselves with scrofulous ophthalmia, there were many that required long and continued treatment; and, of course, one system would not apply to the variety of cases which occurred. In some, local stimulants and the antiphlogistic plan answered best—in others, tonics were required; several were benefited by the internal use of the liquor potassæ, and three or four almost inveterate cases were cured by the exhibition of the ext. hyosciami, after the foregoing methods had failed of success. Keeping the lower lid depressed by the use of adhesive plaister, in one instance, seems to have been beneficial.

Many of the cases of amaurosis were obviously incurable; but several individuals have completely regained their vision, although they had laboured for some time under this disease; in many of the severer cases, relief has been given to urgent or painful symptoms.

Several patients have applied with disorganization of the eye from inflammation, in some cases the consequence of injuries. Such relief was afforded as their particular states would admit of; but in some instances, the derangement of the structure of the eye was so great, that a cessation of local irritation was all the benefit that could possibly be obtained.

The treatment of iritis, has been that usually adopted at this hospital—antiphlogistic remedies—the use of oil of turpentine in some, and of mercury in other cases. Two of these, as will be seen in a more detailed account, were not so successful as the remainder; but there are some peculiar features in these cases which will account in part for the occurrence. Such has been the treatment of the cases contained in the numerical return annexed to this report. The operations for cataract have, with one exception, a case of extraction, been attended with success; but in that instance so much inflammation followed the operation, that the patient will not recover the use of that eye.

Operation of Depression	1
———— Breaking up the Cataract	6
———— Extraction	3
——— for a capsular Cataract. To be repeated.	1

Added to this statement is a more detailed report of such cases as possess particular interest. They are extracted from the books which are kept at the hospital, and have all occurred during the last few months. We shall endeavour to select such cases of each of the more important and frequent diseases of the eye, as will display the effects of different or opposite methods of treatment. It is only by comparisons like these, instituted in a spirit of candour and pursued with care, uncoloured by partiality, and as scrupulously correct in the detail as circumstances will permit, that any solid or permanent improvement can be expected in the treatment of these complaints. With every disposition to adhere to the facts, inaccuracies must necessarily creep in, and all that the reporters can promise, is to use their best endeavours to avoid them.

In the following report we shall pursue what appears to be a natural order, giving first the cases of affections of the superficial tunics, and external parts of the apparatus of vision, and then the deeper-seated diseases. Pursuant to this method we will consider seriatim the affections of the conjunctiva—those of the cornea—of the iris—of the lens—and finally that extensive and formidable class of alterations of the deeper tunics, of which amaurosis is the symbol and the representative.

Before we commence the detail of these cases, we venture to indulge in a few observations on the general arrangements of this Institution, and in doing so we reluctantly refrain from offering Mr. Guthrie what cannot justly be termed a compliment, on the indefatigable zeal with which he has raised it to its present station, the talent with which he presides over the department peculiarly his own, and the anxiety which he displays in affording opportunities of practice and instruction to the gentlemen who are studying ophthalmic surgery within its walls. These gentlemen, owing to the opportunities which they enjoy, must necessarily extend to a very wide circle, the advantages derived from the establishment of an Ophthalmic Hospital at the West end of the metropolis.

To return from this digression. The hospital is calculated to accommodate both in and out patients. Owing to the expenses which have been incurred in the erection of the building, but few in-patients can at present be received, but the number of those who attend as out-patients is very considerable. The latter are seen regularly on the days of Mr. Guthrie's attendance, thrice in the week. From 120 to 140 and upwards are usually present. Patients are admitted on application. After the applicant is seen by Mr. Guthrie, he or she is confided to the care of a pupil, who obtains the management of the case under the superintendence, and, if necessary, direction of Mr. Guthrie. Notes of each case, with the record of the treatment are preserved, and if the details are sufficiently interesting they are transferred to the hospital books which are kept for the purpose. Such is a general outline of the management of the institution. It is supported by subscribers of one or two guineas annually, who become by their subscription Governors. We do not solicit eleemosynary bounty for the hospital, yet we may be permitted to observe that it well deserves the encouragement of those anxious for the diffusion of information and advancement of science in the profession, and of all benevolent and humane individuals out of it. If sufficiently supported, it will be the means of materially diminishing the infirmities and consequently the miseries of the poor in its immediate vicinity, as well as of rendering the young men educated in the West end of the metropolis more qualified to execute their professional duties, with credit to themselves, and advantage to the public.

AFFECTIONS OF THE CONJUNCTIVA.

1. CATARRHAL OPHTHALMIA.

This, as our readers are aware, is the most common affection of the eye, at least in persons beyond the age of puberty and adults. The redness is usually inconsiderable, at least in the conjunctiva of the globe—there is much epiphora—and the feeling of sand within the palpebræ is very inconvenient. The usual treatment pursued at this hospital, in recent cases, is to give an emetic or purgative, or an emeto-cathartic, as the mixture of the tartarized antimony and the sulphate of magnesia, and drop into the eye a solution of the nitrate of silver, gr. iv. ad ℥j. or introduce the unguentum argenti nitratis. Leeches, cupping, or blisters are rarely used, but occasionally they are so, when the severity of the pain, or the extreme vascularity, or extreme epiphora, appear to require them. This treatment is very successful, and practitioners unaccustomed to or unacquainted with it, at times evince no little surprise at the benefits derived from it. We shall give a few cases in which different applications were adopted.

CASE 1.—*Catarrhal Inflammation of both Eyes—Solut. Arg. Nit. used for one—Ung. Arg. Nit. for the other. Cure.*

Ann Andrews, æt. 39, a waistcoat-maker, stout and apparently healthy, applied at the hospital April 2d, 1832. There was catarrhal ophthalmia of either eye, puffiness of the palpebræ, a sensation of great heat, and much epiphora. The right eye had been affected for five days, and worse than the left; this latter had been affected for three days.

Unguentum argent. nit. oculo dextro. Lotio argenti nitratis, gr. iv. *ad* ℥j. *oculo sinistro. Magnes. sulph.* ℥ss. *c. Ant. tart.* gr. ij. *hodie.*

3d. *Repet. ung. et lotio.*

4th. Both eyes greatly improved, left the most so. Says that the ointment produces such pain, which continues during the day, that she will not submit to its future employment. Wishes solution to be used to both eyes.

Appr. lotio oculo utrique. Magnes. sulph. ℥ss. *hodie.*

9th. Solution has been applied every other day. Is now quite well—indeed she has been so for two or three days. This was a severe case on its first appearance, and the result of course satisfactory.

CASE 2.—*Catarrhal Ophthalmia of both Eyes, cured by the Ung. Argent. Nit.*

Mary Ann Lanthorne, æt. 53, seller of street breakfasts, 13th April, 1832. Slight catarrhal ophthalmia of left eye, not much vascularity nor epiphora; right affected, but to a less degree. Complaint has existed for six weeks.

Of rheumatic habit, and attributes the affection to cold in following her employment.

Unguent. argent. nit. oculo utrique. Pil. hyd. Ext. col. c. āā gr. v. *h. n.*

16th. Eyes improved.

Pil. al. c. myrrh. gr. v. *h. n. Repr. unguent.*

30th. Has absented herself since last report. Eyes much worse—great epiphora—agglutination of edges of palpebræ in the morning.

Ung. hyd. nitrat. mitius palpebris. Pulv. rhæi, c. Cal. h. n. Mag. sulph. crâs. P. c. ung.

May 2. Better. Excoriation at outer canthus of left eye, apparently from the epiphora.

P. emp. canth. temp. sinistro.

This plan was persevered in, and, on the 18th, she returned thanks and was dismissed. The only remnant of her malady, was a disposition to agglutination of the lids in the morning, and some weakness of vision. For this she had some dilute citrine ointment, and was directed to employ ablution, &c. Had the patient attended regularly in the first instance, it is more than probable that she would have been cured by two or three applications of the black ointment. As it was, the effect was marked and satisfactory.

CASE 3.—*Catarrhal Ophthalmia, of a Month's Standing, cured by Solut. Argent. Nit.*

George Marshall, a cabinet-maker, æt. 17, April 30th, 1832. Catarrhal inflammation of either eye—affection not very severe. Looks out of health—bowels confined. Affection has existed for a month—has only used warm water.

Solut. argent. nit. (gr. vj. *ad* ℥j.) *oculo utrique. Pulv. jal. c., C. mag. sulph. crâs.*

May 2d. Much better; scarcely any conjunctival redness. Sensation of sand between the globe and upper lid. *P.*

4th. Relapse last night. The weather is very cold, and many of the patients have applied with relapses.

Pulv. cal. c. rheo, h. n. Mag. sulph. crâs. P. c. solutione.

9th. Scarcely any epiphora or vascularity, but eyes feel weak in the mornings.

P. c. solutione ter in hebdomadâ. Solutio hyd. oxymuriat. (gr. j. *ad* ℥vj.) *pro collyrio, bis terve die.*

18th. Wishes to be discharged—merely a little weakness of the eyes in bright sunshine.

Habeat solut. hyd. oxymur. ℥vj.

Discharged.

CASE 4.—*Old Catarrhal Ophthalmia, cured speedily by Cup. Sulph.*

Martha Thorpe, æt. 29, March 28th, 1832. Catarrhal inflammation of one eye, of five months' duration.

Pulv. jalap. comp. ʒj. *Applicetur palpeb. Cup. sulph.*

30th. *Rep. Cup. sulph.*

April 11th. The blue stone has been applied every other day, and the patient considers herself cured. Dismissed.

We have taken these few cases of catarrhal ophthalmia indiscriminately and without selection, as they shew the usual method of treatment and its results. We have seen no case that has not terminated well and speedily, though, of course, we do not mean to say that catarrhal inflammation will not occasionally end in graver affections, under any management. However, it is quite certain that the copious leechings and active depletion that were formerly resorted to by all, and are still practised by many, are not to be compared, in point of safety and success, with the modern moderately-stimulating plan. As an instance of this, we may mention a case now under treatment. A woman applied, a few days ago, with old catarrhal inflammation of one eye and recent affection of the other. She stated that the inflammation of the former began just in the same manner with that of the latter. She had been from the first under the care of an eminent oculist; but, becoming dissatisfied at the progress of the case, she had just discontinued her attendance upon him. She had been freely leeched, cupped, and purged.

We dropped a solution of the argent. nit. into the worst eye, and vinum opii into that recently affected, applied a blister to the temple, and gave a strong aluminous lotion. Two days afterwards she returned, with the recent catarrhal inflammation cured, and that of the other eye much relieved.

Case 5.—*Chronic Inflammation of the Conjunctiva, rapidly cured by Solut. Arg. Nit.*

Eliza Cully, æt. 12, pauper, of very delicate appearance, May 9th, 1832. Considerable vascularity of the conjunctiva, both sclerotic and palpebral, of left eye—vessels on former disposed in form of net-work, of rather dull tint—palpebral conjunctiva villous in appearpearance. At outer margin of cornea, an elevation, apparently caused by deposition between the conjunctiva and sclerotica; slight pustules on this elevation, with contiguous superficial ulceration of margin of cornea. Little epiphora—slight intolerance—some nocturnal pain in temple—cornea clear—pupil rather contracted.

Affection has lasted three weeks—leeches and blisters have been applied—is getting worse rather than better. Was formerly O. P. twice.

Pulv. rhæi, c. cal. h. n. Solut. arg. nit. (gr. v. *ad* ℥j.) *ter in hebd. Ung. hyd. mitius o. mane palpeb.*

14th. Much the same.

P. emp cauth. ponè aurem.

18th. Remarkable improvement—vascularity nearly gone. *P.*

23d. Cured—to have some citrine ointment.

As blisters had been previously applied without benefit, it is reasonable to suppose that the local stimulants were operative in effecting the cure.

II. Purulent Ophthalmia.

Case 6. *Gonorrhœal Ophthalmia, treated by the Unguent. Nigrum.*

John Durant, æt. 21, admitted Aug. 10th, 1831. The left eye is destroyed, nearly the whole of the cornea having sloughed away, and the humours having escaped—conjunctiva extremely vascular and chemosed—lids thickened but not much swollen—profuse purulent discharge—no pain.

Purulent inflammation commencing in right eye—conjunctiva and sclerotica not much inflamed—discharge slight—complains of pricking pain in the eye, which prevents sleep. Slight discharge from the urethra, with excoriation of the glans and inner surface of the prepuce. Health much impaired—general feverishness, with pains in the joints.

Has had gonorrhœa for the last two months. When gonorrhœa appeared, took Leake's pills for six weeks. The ardor urinæ and discharge diminished, but a fortnight ago the left eye became inflamed. He continued the pills for three or four days, but the eye becoming rapidly worse, he went to a medical practitioner, who applied four leeches to the temple; the leeches were repeated at short intervals to the number of twenty, and a blister was applied behind the ear. Two days ago the right eye became affected, and he was ordered by the same gentleman the same application of four leeches! He states that the disease commenced in the left eye in a manner precisely similar to that in which it appears in the right; the swelling of the lids and discharge came on about the fourth or fifth day, and gradually increased, attended with a throbbing pain, till the eye burst, when all diminished. The discharge from the urethra has gradually lessened since the left eye became affected. He is not aware of having transferred the gonorrhœal matter in any way to the eye; he had gonorrhœa once previously, but it was unaccompanied with any ophthalmic inflammation.

Unguent. nigrum oculo dextro. Lotio aluminis oculo sinistro. Pulv. jalapæ comp. ʒj.

11th. Says his right eye is quite free from the pricking sensation before experienced—redness not much diminished.

To foment the eye with tepid water.

12th. Inflammation of right eye much less, sight stronger, and he is surprised to hear that the application of the ung. nig. is again necessary. Discharge from left eye diminished. *P.*

14th. Inflammation now so trifling that the application of the ointment is omitted to day.

Pulv. jalap. comp. ʒj.

17th. Right eye nearly well—no pain in left.

Guttæ argent. nit. (gr. viij. *ad* ℥j.) *oculis ambis.*

Sept. 2d. Left eye has been gradually improving—right quite well.

Case 7. *Gonorrhœal Ophthalmia cured by black ointment.*

James Griffiths, æt. 19, admitted Nov. 17th, 1831.

Both eyes inflamed—conjunctiva very vascular and slightly chemosed—corneæ and iris healthy, but sight dim—not much pain. Has had gonorrhœa for a fortnight, and the discharge from the urethra still exists, but has lately much diminished. The eyes have been hot, itchy, and uncomfortable for the last week, but inflamed for two days only; the inflammation rapidly becoming worse he came to this hospital.

Ung. nigrum oculis ambis. Hyd. sub. gr. vj. *c. Mag. sulph. postea.*

The ointment and pills were repeated on the 18th and 19th.

20th. Very much better—no remaining inflammation, save a slight increase of vascularity of the palpebral conjunctivæ—still slight discharge from the urethra.

Omr. ung. nigrum. Guttæ arg. nit. (gr. vj. *ad* ℥j.)

21st. *Rep. guttæ.*

23d. Well—dismissed.

Case 8. *Gonorrhœal Ophthalmia—frequent Relapses—cured.*

John Haynes, æt. 21, admitted Nov. 27th, 1831. Conjunctiva and sclerotica of right eye exceedingly vascular, with slight chemosis—cornea dim with small ulcer in its centre—iris darker than that of other eye, but pupil regular and acting freely. Lids much swollen and inflamed, so that he cannot open the eye so widely as the left. Constant discharge of hot tears, but no purulent matter. Eye feels very hot and uneasy, but is free from pain—sight very dim. Slight discharge from the urethra without scalding.

Has had gonorrhœa for six weeks and taken copaiba. Inflammation of eye came on three days ago. He thinks it was caused by dirt getting into the eye, as the sensation was similar to what such would produce, but no extraneous substance could be found on examination. The inflammation has been gradually increasing.

Ung. nigrum oculo. Hyd. sub. gr. vj. *statim. Posteà Pulv. jal. c.*

28th. Eye feels much easier and cooler; epiphora diminished; redness much as yesterday—ointment caused pain for two hours.

Rep. ung. c. pil.

29th. Better—less redness—no pain.

Rep. omnia.

30th. Inflammation of conjunctiva much diminished—iris and cornea not improved in the same proportion—no pain—sight much clearer—bowels well open.

Rep. omnia.

Dec. 1st. Improving—cornea clearer—ulcer not so distinct—purged. *P.*

2d. Going on well. Cornea brighter—iris of natural colour—chief vascularity at margin of cornea. Eye-lids still much inflamed, and urethral discharge continues. *P.*

On the 5th the improvement was such that the ointment was discontinued, and the solution of nitrate of silver applied night and morning. On the 12th nothing remained but a slight inflammation of the palpebral conjunctiva. On the morning of the 13th the whole conjunctiva was found to be inflamed, with epiphora, but no pain.

Ung. nigrum. Pulv. jalap. c.

14th. No redness this morning; slight discharge of tears. *Resumr. guttæ argent. nit.*

19th. Came to-day with left eye inflamed. On the evening of the 17th he first felt the eye uneasy, the uneasiness rapidly increased, and now the conjunctiva and sclerotica are much inflamed—cornea and iris natural—heat and pricking pain in the eye.

Ung. nig. Pulv. jal. comp.

20th. Better—less inflammation—very little pain.

Cal. gr. vj. *h. n. Mag. sulph. cràs.*

23d. Not so well. Conjunctiva and sclerotica more inflamed—lids swollen—epiphora—eye feels hot and heavy.

Ung. nigrum. Ant. tart. gr. ij. *c. Mag. sulph.* ℥ss.

24th. Emeto-purgative operated.—Very little inflammation, save of palpebral conjunctiva.

Cupri sulph. palpeb.

We need not pursue the details farther. The patient was cured, but several slight relapses occurred.

These are all the cases of gonorrhœal ophthalmia entered in the books, as having been treated at the hospital within the last nine months. They are taken indiscriminately, and will serve, perhaps, to dispel the prejudices of those, who look upon the stimulating plan of treatment as a dangerous and unnatural innovation on the vested rights of leeches and phlebotomists. We can only judge of the merits of a particular mode of practice by comparing it with other modes. The most strenuous advocate of depletion could hardly choose a better text-book than the work of Mr. Lawrence on Gonorrhœal Ophthalmia. The amount of depletion resorted to in many of the cases treated and recorded by that gentleman is enormous. Patients were almost brought to the verge of the grave by the lancet, yet the inflammation of the eye went on, in too many to the destruction of the organ. It surely is a cutting satire on depletion, when its warmest advocate publishes a collection of cases in which it is employed with almost uniform want of success. If any gentlemen feel a doubt of the comparative safety and value of stimulants and depletion, we would recommend them to place side by side, and carefully compare, the foregoing cases reported from this hospital, with the long list of failures in Mr. Lawrence's work.*

Case 9.—*Ophthalmia Neonatorum of four weeks' duration, cured.*

Ann Jones, aged 5 weeks, Feb. 24th, 1832.

Purulent ophthalmia of right eye—lids slightly swollen and red, and pus pours out on their separation—cornea muddy, without ulceration. On the left eye a growth of conjunctiva overlapping the lower edge of the cornea.

Right eye affected four weeks. Left eye was affected at same time, but was relieved by the medical gentleman in attendance. Mother states that she was affected with leucorrhœa previous to delivery. *Ung. nigrum.*

Alum lotion to be used with syringe.

25th. Less inflammation—less discharge.

P. ol. ric. ʒj.

27th. Did not bring the child yesterday—doing well.

28th. Not so well.

Omr. ung.—Appr. lot. argent. nit. (gr. iv. *ad* ℥j.) *P. c. lot. aluminis.*

On the next day the discharge was completely gone, and the inflammation very slight. The lotion of the nitrate of silver was continued. On the 4th March, the child was discharged cured.

Case 10.—*Ophthalmia Neonatorum, of nearly five Weeks' duration, cured.*

Maria Lawrence, aged five weeks, March 9th, 1832. Purulent ophthalmia of both eyes—lids much swollen and inflamed—pus pours out on their separation—corneæ scarcely visible; they appear muddy, but without ulceration.

The nurse perceived discharge from the child's eyes a few days after its birth; but nothing appears to have been done. The mother had leucorrhœa at delivery.

Unguent. nigrum. Lotio aluminis frequentius.

On the 10th the child was not brought. On the 11th, the discharge from both eyes was less—lids still swollen.

P. ol. ric. ʒj.

12th. Discharge gone—scarcely any inflammation—an ulcer now seen on centre of cornea of right eye. *P.*

13th. Improving. Opens its eyes a little, and lids less thickened. *P.*

17th. Improving—right cornea still muddy.

Solut. argent nit. (gr. viij. *ad* ℥j.) *vice ung. nigri. P. c. Solutione aluminis.*

26th. Ulceration of the cornea healing. The child recovered perfectly.

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* That work was very fully reviewed in this Journal, and our readers will find in our analysis the particulars of every, or almost every, case of gonorrhœal ophthalmia which it contains.

CASE 11. *Purulent Inflammation, with Ulcer of Cornea—Cure.*

John May, aged three weeks, Feb. 13th, 1832. Lids of both eyes much swollen—great purulent discharge from between them—intolerance of light, but can open the eyes a little. The cornea of right eye muddy and much ulcerated—that of left clear. Is stated to have had bad eyes since birth. For the first two or three days there was a discharge of scalding tears, afterwards of purulent matter.

Unguent. nigrum. Lotio aluminis. Ol. ric, ʒj. *cras mane.*

15th. Better—less discharge—ulcer of left cornea healing.

Rep. ung. nig. et lotio et ol. ric.

20th. Has not been here since 15th. Eyes better. Cornea of right eye clearing, and ulcer not so deep—left nearly well. Less discharge.

Guttæ arg. nit. (gr. vj. *ad* ℥j.) *o. mane. P. c. lot. aluminis.*

This patient, we believe did very well, and was dismissed soon afterwards cured.

CASE 12 *—*Gonorrhœal Ophthalmia.* George Taylor, æt. 21, admitted 26th Dec. 1831, with all the appearances of severe gonorrhœal ophthalmia in the right eye. The lids are red and swollen, and there is a plentiful discharge of thick purulent matter. On raising the lids the conjunctiva is seen red, and in a state of chemosis, so that the cornea is considerably below the level, and its edge is supposed to be slightly ulcerated—the centre remains perfectly clear. Some weeks ago—eight or nine—he remembers to have observed a discharge from the urethra, which produced no scalding or inconvenience; he took a few doses of salts, and in about ten days it disappeared. The urethra at the present time seems slightly inflamed, but there is no discharge observable. Nine days ago he felt a pain in his head, and if he stooped, or moved his head quickly, an intolerable sense of weight over the right eye, and the next day matter was discharged from it. On the third day he was unable to work, and an old woman recommended him to apply two leeches to the lower lid and a blister behind the ear, also to apply a cold poultice—by which he thinks the swellings of the lids was somewhat diminished—he also took salts and senna every day up to yesterday.

Appl. c. c. tempor. ad ℥xx. *Calomel,* gr. vj. *o. Opio* gr. j. *h. s. s. Magn. sulph.* ℥j. *cras mane. A lotion, with two grains of alum to the ounce, to be frequently injected.*

Mr. Guthrie turned out the thickened and vascular lids, and with a camel-hair pencil applied the black ointment freely over the whole surface of the inflamed conjunctiva, which appeared whitened after a few minutes by the application.

6, p.m. He has lost full ℥xx. of blood; the chemosed conjunctiva looks pale and flabby instead of the turgid and red appearance it had. The injection has been used, and the discharge appears less copious.

Dec. 27th. There is a sensible improvement in the case. The tumefaction of the lids has in a great measure subsided; the discharge is less, and he is free from pain; the chemosis is considerably reduced, and the conjunctiva has almost entirely lost its red and turgid appearance.

Rep. magn. sulph. Cont. lotio. He has been freely purged.

Dec. 28th. The chemosis has nearly subsided, the edges of the cornea are seen to be regular, the discharge is much diminished, and altogether there is the most decided improvement. The lids are still thick and vascular. He has used the lotion frequently, and has been freely purged by his medicine. The ointment has been applied to-day, but not quite so freely as before. Pills and salts repeated.

Dec. 29th. There is little perceptible change; he is going on well however. The black ointment has been applied.

31st. Continues improving.

Jan. 4th. 1832. He continues to improve. The swelling of the lids is abating, as is the inflammation. He is free from pain.

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* This was not received sufficiently early to be incorporated with the others.

The black ointment has been applied.

6th. He is better; the redness of the conjunctiva seems to arise more from the lids having become granulated than inflammation. The black ointment has been omitted, and the sulphate of copper applied gently to both sides, with a drop of oil to each eye.

III. STRUMOUS OPHTHALMIA.

There can be little doubt that many of the inflammatory affections of the textures of the eye are more or less modified by scrofula. But two particular affections would seem to be more frequently than others produced by this agency, or at least occur oftener in scrofulous subjects. These are the strumous inflammation of the cornea and its conjunctival covering, and the formation of little vesicles or pustules at the margin of the cornea. In both these affections, especially in the former, there is usually great epiphora and intolerance of light, these being in fact the most distressing symptoms. Yet we not unfrequently see the pustular or phlyctenular ophthalmia with scarcely any increase of lachrymation or intolerance of light. Such cases are managed without difficulty. In our present state of knowledge it would be an arbitrary and unjust decision to pronounce these the only scrofulous affections of the eye. Ulcers of the cornea, for instance, with very little corneitis, are sufficiently common in scrofulous children to justify us in suspecting the scrofulous habit as their cause. At present however we restrict ourselves to strumous corneitis and phlyctenular inflammation.

CASE 13.—*Pustular Ophthalmia cured by the Oxymuriate Lotion.* Daniel Burns, æt. 5, April 9, 1832. This patient has been at the hospital formerly, but owing to some circumstance or other discontinued his attendance till the present time. He has now strumous ophthalmia of left eye, with marginal pustules. Vascularity not very great —much epiphora and intolerance. Catarrhal inflammation of right eye without pustules. Is a stout child, but is ill fed and has evident derangement of the digestive organs.

Left eye has been affected four days —right eye for a fortnight. Nothing has been done for him.

Pulv. cal. c. scammoneâ, gr. vi. h. n. Mag. sulph. cràs. Lot. hyd. oxymur. sæpe indiès oculis. Ung. flavum.

11th. Much improved. *P.*

16th. Merely slight intolerance. *P*

30th. No pustules or phlyctenulæ—no epiphora nor intolerance. Merely a little weakness of right. To have some lotion. Dismissed.

We might detail several other cases in which a lotion of the oxymuriate or sulphate of zinc, or nitrate of silver, speedily removed this pustular affection. A moderately stimulating treatment with attention to the bowels will usually remove the present affection, but the tendency to relapse is not so easily got rid of. This can only be counteracted of course by what is calculated to improve the state of system upon which it depends.

Strumous corneitis is more severe, more mischievous in its effects, and more difficult to manage, than the preceding affection. It is singular, however, how instantaneously patients will frequently be relieved of all the acute symptoms. A patient will be suffering to the utmost degree, unable to open the lids or allow them to be opened, with deluges of scalding tears streaming down the cheeks, and considerable sympathetic fever, when suddenly under the effect of medicine these distressing symptoms will be dispelled as by a charm, and merely a little vascularity and weakness of the eye remain. Such patients, like the former, are very liable to relapse, and this tendency to sudden exacerbations and remissions it is, which has contributed to confer on particular modes of treatment, both empirical and professional, a degree of reputation which they do not in general deserve. At one time an emetic, at another an active purgative, or a blister, or hyosciamus, or calomel and opium, will achieve an almost miraculous cure to the astonishment of the patient and the great credit of the remedy. It is difficult, perhaps it is impossible, to point out the modifications which call for these various modes of treatment. In the present instance we shall merely record some cases illustrative of the characters of this singular complaint.

CASE 14.—*Strumous Corneitis, with Ulcers at Margin of Cornea—result not known.* Charles Angler, æt. 10, Dec. 21, 1831. Profuse flow of tears, not scalding, from right eye—great aversion to the light—on opening them near the light sneezing—some conjunctival inflammation—an ulcer on the inferior and inner margin of cornea, with red vessels running towards it. More conjunctival inflammation of left eye, the cornea of which is muddy and reddish—an ulcer at its outer and superior part. Patient of a strumous habit.

Right eye was affected with inflammation three years ago—present attack of three month's duration; it came on gradually.

C. c. ad ℥viij. *temporibus. Pulv. jalap. c.* ℈ij. *Appr. cup. sulph.*

26th. Better—less irritation. *P.*

28th. More intolerance of light and greater inflammation of conjunctiva.

Emp. canth. temp. Ant. tart. gr. ij. *pro emetico.*

30th. Much better, but still considerable inflammation.

Cup. sulph. Pulv. jalap. c. ℈ij.

Jan. 2d, 1832. Eye much better—corneæ more clear—vessels of conjunctiva less red. *P.*

4th. Not so well—more intolerance of light. *P.*

A cloth wetted with one part of vinegar and ten of water to be laid upon the eye.

6th. Better since application of lotion.

9th. A relapse, attributed by his mother to his having gone out in the damp.

Emp. canth. temporibus.—Mag. sulph. ℥ss. *Ant. tart.* gr. ij. *h. n.*

11th. Not any better.

Hirud. iij. *tempor. h. n.—Rep. Mag. sulph. c. Ant. tart. crâs.*

The patient was a little better at next visit, but the case is kept up no further.

CASE 15.—*Corneitis, with Marginal Pustule and Interstitial Deposition in the Cornea.*

Mary Lee, æt. 3, Jan. 28th, 1832. Conjunctival inflammation of left eye—pustule at inner margin of cornea, with red vessels running to it—muddiness of cornea—interstitial deposition, apparently commencing in centre—intolerance of light—excoriations about the lids, and vessels of the upper one enlarged.

Has had frequent attacks of inflammation of the eyes for the last four months. Present affection came on suddenly within the last week.

Hyd. submur. gr. ij. *Quininæ sulph.* gr. j. *M. 4tis horis sumend.*

21st. Conjunctival inflammation less—pustule at margin of cornea absorbed—cornea still muddy—interstitial abscess not increased. Child has rested better. *P.*

23d. Considerable conjunctival inflammation—interstitial deposition not increased.

25th. Conjunctival inflammation not increased—ulceration over the interstitial deposit, and a small quantity of matter in the anterior chamber; does not complain of much pain.

Unguent. nigrum. P. c. Cal. et Quinin.

26th. Eye very much improved—ulcer looks healthy—conjunctival inflammation much reduced, and part of the hypopium absorbed.

Solut. arg. nit. (gr. viij. *ad* ℥j.) *P. c. Hyd. sub. et Quininâ.*

27th. Ulcer healthy and conjunctival inflammation decreasing. *P.*

30th. Improved, and though medicine has not been given regularly, matter is becoming absorbed.

We need not follow up the case; under the foregoing plan of treatment it did well.

A very interesting case of strumous corneitis recently occurred. A scrofulous young girl, with strumous inflammation of the periosteum and bone of the right arm, had suffered, on several occasions, from inflammation of the eyes. She applied at the Ophthalmic Hospital with well-marked strumous corneitis of both eyes. She was cupped and purged, and the black ointment was introduced. On the succeeding visit she was improved, and the plan was persevered with. She then had a very severe relapse. The stimulating treatment was now abandoned, and emetic-purgatives, with cold-water lotions, were employed. The improvement was only temporary. The corneitis was as acute as we have ever seen it, the sympathetic fever considerable. Hyosciamus, in doses of five grains thrice daily, was next employed; it failed. The child was then put on calomel and opium. As soon as this affected her mouth, which it did in two or three days, the epiphora and intolerance disappeared, the vascularity and muddiness of the cornea subsided, and, from a state of great suffering, the patient was suddenly restored to one of comparative comfort.

In another case, which is still under treatment, a similarly fortunate result was obtained by an emeto-cathartic. The intolerance and epiphora in a male child were very great, so much so, that it was impossible to ascertain the exact amount of changes in the cornea. The child had suffered more or less from the affection for a year. At first, a solution of nitrate of silver, with blisters, were employed. These failed. The tartarised antimony, with Epsom salts, was then given. After the first dose, which operated strongly, the patient was able to open his eyes, the epiphora had disappeared, and hitherto no relapse has recurred.

We lately saw another case, under the immediate care of another gentleman. This appeared to have been a severe one, and we understand that several plans of treatment had been tried without success. This patient rapidly recovered under the administration of five grains of the extract of hyosciamus thrice daily. No doubt instances of this kind might be multiplied. In our next report, we shall endeavour to arrange the cases better than we are enabled to do at present, and to give such a full account of them as may prove serviceable to the professional public. Mr. Middleton has attached much importance to the sulphate of quinine. No doubt it is a valuable medicine, when given at the proper time; but it certainly will not effect with the patients at this hospital, what it appears to do with Mr. Middleton's.

Case 16.—*Corneitis, with Pustule—Interstitial Abscess.*

Henry Lee, æt. 11, Jan. 11th, 1832. General conjunctival inflammation of left eye—muddiness of cornea—interstitial deposition in its centre—varicose state of the veins of the upper lid. Intolerance of light—pain in the head and orbit—bowels regular.

Has been subject to frequent attacks of inflammation in the eyes. Present commenced suddenly, fourteen days ago, but has been much worse within the last five.

C. c. temp. sinist. ad ℥iv. *Hyd. submur.* gr. ij. *6tis horis.*

12th. Much better. Can see the light without the degree of pain formerly experienced—vascularity diminished—less pain of the head and orbit.

13th. Cornea not so muddy, but ulceration commencing in it over the interstitial deposition—conjunctival inflammation less—intolerance of light much less—pain in eye and head diminished.

Hyd. submur. gr. ij. *bis die.*

16th. Mouth slightly affected—ulcer superficial, small, and healthy—inflammation less, and no pain.

Omr. Hyd. sub. Pulv. jalapæ c. ʒss. *Solut. argent. nit.* (gr. viij. *ad* ℥j.)

18th. Increased conjunctivitis.

P. Appr. hirud. iij. *tempori.*

20th. Inflammation of conjunctiva still considerable—ulcer healthy—pain of eye not increased—pain in the head. Leeches were not applied near enough to the eye.

C. c. temp. dext. ad ℥iij. *Hyd. sub.* gr. j. *6tis hor.*

23d. Not much improvement.

Hyd sub. gr. iij. *6tis hor. Ung. argent. nit.*

27th. Improvement great, apparently from larger quantity of calomel—cornea clear, excepting over the interstitial deposition, where there is ulceration.

P. c. Hyd. sub. Solut. arg. nit. (gr. viij. *ad* ℥j.)

February 1st. Eye improved—cornea clearer—interstitial deposit almost wholly absorbed. *P.*

5th. Ulcer healing—conjunctival inflammation much less.

Omr. Hyd. sub.

℞. *Quin. sulph.* gr. ij. *bis die. P. c. Solut.*

15th. Cured and discharged.

IV. INTERSTITIAL ABSCESS.

CASE 17. R. Davis, æt. 2, admitted Jan. 17th, 1832. Interstitial abscess of the cornea, which has burst into the anterior chamber, at the bottom of which there is a small quantity of matter. The whole cornea is dim, and the abscess is situated in the centre, immediately in front of the pupil; the cornea at this point seems more prominent than natural, and ready to burst externally; the iris is very much discoloured, being reddish-brown, that of the healthy eye blue; conjunctiva and sclerotica a good deal inflamed. The child has been suffering, during the last month, under fever, accompanied with an eruption. The scales have only fallen off during the last week, and two or three red cicatrices may still be seen on the hand.

The eye was slightly inflamed before this eruptive fever; but, during its progress, the inflammation became much worse, the child appeared to suffer much pain, and would not allow the eye to be touched. At present, the little patient seems weak and irritable, but its mother says that, lately, her appetite is much improved—bowels regular. No treatment has been used to the eye.

℞. *Hyd. subm. Quinin. sulph.* āā gr. ss. *Sach.* gr. vj. *M. ft. pulv. 4tis h. s. Appl. Emp. canth. post aurem.*

18th. Opens the eye better—conjunctiva and sclerotica less vascular—quantity of matter in the anterior chamber rather increased.

Omitt. quinin.

℞. *Hyd. submur.* gr. j. *2dis h. s.*

19th. Has taken six pills—mouth slightly affected. The eye is much less inflamed, and the child opens it wider, and will allow it to be touched: interstitial deposition rather less, and the matter in the anterior chamber diminished in quantity.

Cont. Hyd. subm. gr. j. *2dis hor.*

20th. Cornea clearer—less matter in the anterior chamber—iris of a more natural colour—conjunctiva and sclerotica very slightly inflamed now. The child does not appear to suffer much. Mouth more sore.

Cont. n. a.

21st. Improving rapidly. External inflammation very slight indeed—cornea more transparent—interstitial deposit less—the quantity of matter in the anterior chamber much diminished—mouth more sore.

Cont. Hyd. subm. gr. j. *2dis h.*

23d. Mouth not more affected by the mercury—a little more inflammation of the external tunics this morning—but the iris and cornea are more natural, and the quantity of matter in the anterior chamber so small, as only to be seen on very close examination.

Hyd. subm gr. j. *2dis h.*

24th. Took 4 pills yesterday—soreness of mouth not increased—inflammation diminished.

Hyd. subm. gr. j. *6tis h.*

25th. Mouth not more sore—eye much better—cornea more transparent, less deposition—no matter in the anterior chamber—very little redness.

Cont. pil. No. 4 in die. Appl. Ext. belladonnæ, front.

27th. Improving. Iris more dilated—took three pills yesterday—mouth rather more sore.

Rep. pil.

30th. Has taken four pills daily since the last date; the mouth, however, is not so sore as it was. The slight superficial ulceration of the cornea is healing. No matter in the anterior chamber—iris nearly of a natural colour—pupil rather contracted.

Omit. Cal.

From this period she took quinine as a tonic, and had the belladonna applied to dilate the iris.

V. ULCER OF THE CORNEA.

There appear to be several very distinct kinds of ulceration of the cornea, originating probably in different conditions of the system as well as of the part. It is very common in scrofulous children, and a great number of such cases are observed and treated at the Infirmary. In many there is a single circular ulcer of the cornea, usually in its centre, attended with little increase of vascularity, and not much epiphora or intolerance. There are several such cases at the hospital at present; and all are steadily advancing to recovery under the use of solutions of the nitrate of silver, or other stimulants, with attention to the bowels, and in some the sulphate of quina. Frequently the ulcer is productive of more inconvenience, and is either the sequel of severe catarrhal inflammation, strumous corneitis, or a pustule at the margin of the cornea. We have several interesting cases of extensive superficial ulceration of the cornea, but as they continue under treatment we shall defer their publication till the next report.

Case 18.—*Corneitis—Ulcer of the Cornea—result not determined.* Saunders Beavan, æt. 19, Jan. 25, 1832. Considerable conjunctival inflammation of the right eye—vessels very much enlarged, and branches shooting across the cornea—this is muddy—towards inner part of cornea a rather deep ulcer of an unhealthy appearance, with very irregular edges—much epiphora, but tears feel cold—pain in the head on stooping. Slight conjunctival inflammation of left eye. States that right eye has been affected for three weeks, and that it is gradually growing worse.

Ung. nig. oculo dextro—Pulv. jalap. comp. ʒi.

26th. Less pain—conjunctival inflammation and muddiness of cornea lessened—some enlarged vessels in left eye running towards margin of cornea.

Ung. nig. oculis ambis. Mag. sulph. ℥ss. *Ant. tart.* gr. j. *M.*

27th. Right eye much improved—ulcer looking healthy—left eye much benefited by the caustic—largest of the vessels destroyed.

Rep. omnia.

30th. Still considerable conjunctival inflammation of right eye—left much better.

C. c. ad ℥xij. *temp. dext. Ung. arg. nit. oc. dext. Solut. arg. nit.* gr. viij. *ad* ℥j. *oc. sinist. Rep. Mag. sulph. c. Ant. tart.*

31st. Left eye better—right improved, but ulcer not less. Admits that this eye has been inflamed for twelve months. *P.*

Feb. 3d. Ulcer diminishing.

Cup. sulph. Pulv. jal. c. ʒj.

This case proved very obstinate and tedious. The patient was placed on mercury, but with what effect is not stated in the hospital book. We detail this incomplete case, because its very unsatisfactory issue displays the real nature of the disease, and shews practitioners what they may expect. It is not fair to record merely instances of unusually rapid cure.

Case 19.—*Ulcer of the Cornea—Hypopium.*

Eliza Lait, æt. 3, Feb. 7th, 1832.

Small ulcer situated near centre of cornea of left eye—cornea more conical than natural—its whole surface dull and rough, and round its margin a kind of circular ridge, conveying the idea of the cornea having sunk below its natural level. Purulent matter in the anterior chamber. Inflammation of conjunctiva and sclerotica slight; red vessels being only discernible near the cornea, forming a pink zone around it, and some of them passing on to the cornea, and appearing to constitute the ridge alluded to. No pain, uneasiness, nor intolerance.

Eye has been inflamed three months. Six weeks ago the mother observed the first specks; and the second white spot at the bottom of the eye appeared three weeks afterwards. The eye has never been more inflamed than at present and the child has been so free from pain that the mother did not think it necessary to apply for relief.

Hyd. sub. gr. i. *Quin. sulph.* gr. i. *M. t. d. s.*

8th. *Om. Quinina. Cal.* gr. i. *duabus horis.*

13th. Mouth and gums slightly ulcerated—cornea clearer—ulcer smaller—quantity of matter in anterior chamber much diminished.

P. c. Cal. gr. j. *t. d.*

The case is not followed up in the book, but we understand that the patient did quite well.

A child was lately brought to the hospital with central circular ulcer of the cornea and hypopium; the ulcer was not over the hypopium, but the latter was mounting up towards the ulcer, and this was becoming deeper. It was almost feared that the eye could not be saved, or at least that the cornea would be penetrated by the ulcer and the usual consequences ensue. The child was put rapidly under the influence of mercury, and a solution of the nitrate of silver was at the same time employed for the ulcer. For two or three days the issue was doubtful. As soon as the system was fully under the influence of mercury, which in this instance it was, and perhaps to too great a degree, the hypopium almost suddenly disappeared. The ulcer seemed little affected by the mercury, but under the continued use of the solution of the nitrate of silver it was steadily filling up. The parents were alarmed at the salivation and deserted the hospital, but we have since ascertained that the patient recovered completely. As the details of the case were written on the letter and this was never presented by the parents, we are unable to relate the particulars more minutely. The leading facts, are as we state them, the child having been under our own immediate charge.

There is one circumstance to which we may allude before passing to the subject of iritis. Nitrate of silver produces discoloration of the eye, the whole surface of which assumes a dirty yellow tint, far from conducive to the personal appearance of the individual. So far as Mr. Guthrie knows, this has never occurred from the application of the black ointment, but always from solutions. This may, perhaps, be an argument in favour of the employment of the former.

The following case was treated with black ointment which had been made for two years; some person having expressed doubts of the efficacy of the ointment after having been kept for so long a period.

Case 20. William Mills, æt. 6 years, admitted Oct. 5th, 1831. Has an interstitial ulcer on the cornea with severe conjunctival inflammation of six months duration—he suffers great pain, and the tears are hot.

Appl. Ung. argent. nit.

℞. *Ant. tart. gr.* ii. *Lotio tepid.*

7th. Better—less inflammation, and does not complain of so much pain—can bear the light very well.

Appl. Ung a. n. Rep. Ant. tart. et lotio.

14th. Same.

17th. Better, ulcer has healed.

Gutta argent. ung. gr. viij. *ad* ℥j. *P. jalap. c.* ʒss.

19th. Much the same.

Rep solutio.

21st. Relapse—eye not so well, great intolerance of light and flow of tears.

Appl. Ung. nig. a, a. P. jalap c. ʒi.

24th. Better.

Solutio argent.

26th. Cured.

VI. IRITIS.

The three following cases of iritis were treated by the internal use of ol. terebinth.

CASE 21.—Maria Walbrook, æt. 45, admitted Dec. 2d, 1831. Left eye has been affected for six weeks, she then felt pain as if from a severe blow. The last two or three days there has been intolerance of light; sight very much impaired; pressure on the eye gives pain; subject to chronic rheumatism.

There is slight conjunctival inflammation, with a patch of vessels internal to the margin of the cornea; the pupil does not act on light, and is elongated obliquely upwards and downwards, and is irregular; the irregularity is near the inner portion, as if it arose from a partial separation; slight muddiness of the cornea; iris not much discoloured, but appears thicker than natural. This woman had a gonorrhœal discharge about eight months since; her bowels are regular.

℞. *Ol. terebinth.* ʒj. *3tiâ. q. q. h. s.*

3d. Eye is much improved, conjunctival inflammation less, and the pupil restored to nearly its natural figure, if the irregularity, as if from a portion being separated, is excepted; pupil does not act. The turpentine has produced slight giddiness and nausea.

Cont. Ol. terebinth. Appl. lot. Ext. belladonnæ.

4th. Her eye is improved; inflammation less; the pupil irregular and dilated; no intolerance of light; pain of the eye much less.

Cont. terebinth. Lot. Ext. belladonnæ.

5th. Eye better; pupil still dilated and irregular, and not acting; no pain.

Cont. med. Omit. lot. Ext. belladonnæ.

7th. Eye much better; sees more distinctly, but still the pupil is irregular and dilated; colour of the iris natural. Turpentine still causes giddiness and nausea.

Cont. Ol. terebinth.

9th. Increased conjunctival inflammation; the eye otherwise improved.

Appl. hirudines, No. iv. *Cont. Ol. terebinth.*

10th. Conjunctival inflammation relieved by the leeches.

Cont. terebinth.

12th. Sight improved, and iris of a natural colour, but the pupil does not act. *Cont.*

14th. Sight improved; pupil acts, but not so freely as it should do.

19th. Did not attend regularly between the 14th and this date. Eye is improved; sight better.

Cont. terebinth. Appl. vin. opii.

21st. Pupil acts more freely.

Omit. terebinth. Cont. v. opii.

This patient continued to attend for some time with rheumatic inflammation of the external tunics of the eye, but the treatment for the iritis terminated at this date.

CASE 22. Anne Shea, æt. 42, admitted 4th Nov. 1832. This woman has been subject to frequent attacks of rheumatism. About three weeks since her left eye was attacked with dimness. She said it appeared as if a hair was across her eye, which would go off again; then it would seem like a fog or dimness. At that time the ball of the eye ached much, and there was a great flow of tears, which were hot. The eye has continued ever since to be dim, but the tears which now flow are cooler; not much intolerance of light; iris discoloured and irregular; pupil permanently dilated; redness of vessels round the cornea, which is slightly muddy; on looking through the pupil, perceive a greenish tinge; has not had any previous headach which she could refer to any particular spot. The chief pain she has felt in her head was last Summer, that appeared to be rheumatic and was general. Pulse 99, rather strong—skin hot—tongue white—bowels not open.

Appl. C. c. post aurem ad ℥xvj.

℞. *Pulv. jalap. c.* ʒj. *statim.*

℞. *Ol. terebinth.* ʒj. 4*tis h. s.*

5th. Inflammation much relieved by the cupping—pain less—bowels freely open.

Cont. ol. terebinth.

7th. The turpentine produced strangury and giddiness, so as to prevent its being given so frequently as directed, but the woman persevered. The eye is much improved.

Cont. ol. terebinth.

9th. Still greater improvement; pupil contracts on the stimulus of light, though not so much so as in a healthy state; iris less discoloured. The turpentine still keeps up great irritation—vision improved.

Cont. ol. terebinth.

11th. Still better—bowels confined.

℞. *P. jalap. c.* ʒj. *Cont. ol. terebinth.*

14th. Eye improved, pupil contracted and does not act; still the patient sees more distinctly—the irritation caused by the turpentine diminishing.

Cont. ol. terebinth.

16th. Iris of a natural colour; pupil contracted and motionless; no pain; sight improved.

Omit. ol. terebinth. Appl. lot. Ext. belladonnæ.

19th. Vision daily improves; still the pupil permanently contracted.

Cont. lot. Belladon.

23d. Sees more distinctly—no pain, but the pupil does not act.

Lot. u. a.

30th. Remains improving as to vision, but the iris motionless.

Dec. 26th. Did not attend again till this date, when her eye was quite natural in appearance; the pupil acted properly, and her sight was quite restored.

CASE 23.—Thomas Clifton, æt. 32, admitted Dec. 14th, 1831. About 11 days since found weakness of the right eye, but he continued at his work till five days since—then, in consequence of the pain in the ball of the eye, he was obliged to leave off. At present there is great pain in the ball of the eye, increased upon pressure; intolerance of light; conjunctival inflammation, and considerable redness round the margin of the cornea, iris discoloured, pupil of a natural figure, but rather dilated and not acting upon light; upper eyelid hanging over the eye so as partially to close it. Cannot distinguish objects with the affected eye; has not had any syphilitic affection for some years, and is not subject to rheumatism—attributes the present attack to cold.

Appl. C. c. temporibus ad ℥xvj.

℞. *Ol. terebinth.* ʒj. *3tia q. q. h. s.*

15th. Relieved by the cupping.

18th. Pain less—pupil does not act—sight not much improved.

Appl. C. c. ad ℥xij. *Cont. ol. terebinth.*

17th. Pain much relieved, sees better, but still there is conjunctival inflammation; the pupil does not act; bowels regular; the turpentine produces slight giddiness.

Cont. ol. terebinth.

19th. Pain of the eye-ball less; conjunctiva still red; pupil dilated.

Cont. terebinth. V.S. ad ℥xvj.

21st. Pupil not so much dilated; pain nearly removed; none without pressure; conjunctival inflammation less; complains of irritation from the turpentine.

Cont. terebinth.

23d. Better.

Appl. Ext. belladon. Cont. terebinth.

26th. Pupil more dilated; iris less discoloured; sight better.

Ol. terebinth. 6tis h. s. Appl. ext. belladon. bis die.

30th. Conjunctival inflammation wholly subdued; sees better.

Cont. med. et appl.

Jan. 2d. Sees more distinctly.

Cont.

4th. Pupil more dilated, and those of the left eye affected by the use of the belladonna, so as to impair vision.

Omit. belladon. Cont. terebinth.

6th. Improving; pupil not so much dilated; vision improved; iris of natural colour.

Cont.

13th. Iris of a natural colour, and acts regularly; vision restored. Discharged cured.

The following cases of iritis were treated by the exhibition of calomel.

CASE 24.—Thomas Down, æt. 61, admitted 1st Dec. 1831. He states that, on Tuesday week last, he experienced itching of the right eye, which was followed by dimness and pain, with flow of scalding tears, and great intolerance of light. The conjunctiva very vascular and red, the iris discoloured, and the pupil contracted and fixed; there is a patch of lymph clouding the inferior part of the iris. He has not had gonorrhœa or syphilis for 30 years. He complains of great pain on the slightest pressure.

Appl. c. c. ad ℥xvj.

℞. *Pil. hyd. subm. Ext. col. comp.* āā gr. v.

2d. Eye much the same.

℞. *Hyd. sub.* gr. ij. *Pulv. opii*, gr. ¼. *M. secund. h. sumend. Appl. ung. hydrarg. palpabræ sup.*

3d. His eye is not so well; there is a greater deposit of lymph; the iris is more irregular, and the conjunctiva is more vascular.

℞. *Hyd. submur.* gr xxxvj. *Pulv. opii*, gr. vj. *M. et divid. in pil.* No xij. *una secund. hor. sumend.—rept. ung. hyd.*

4th. His eye is rather better; there is not so much deposit of lymph; less conjunctival inflammation; does not suffer so much pain; mouth slightly affected by the calomel.

Rept. pil. No. 1, *6tis h.—cont. appl. ung. hyd.*

5th. His eye is not quite so well; the deposit of lymph surrounds the pupil, but is thicker on its inferior margin, partly closing it. The conjunctiva is much the same.

Rept. pil. 4tis h. s. Rept. ung. hyd.

6th. His eye is better; there is not so much deposit; the conjunctiva is less inflamed; he complains greatly of his mouth, which is very sore; his bowels are much irritated and painful.

℞. *Ext. opii*, gr. ij. *statim. sumend.*

Magn. sulph. ℥j. *cras mane. Appl. ung. hyd.* āā.

15th. Eye is much better, the deposit of lymph is nearly absorbed, the pupil is becoming more regular, and the iris is resuming its natural colour. He has not attended since the 6th, as his face was so much swollen.

℞. *Magn. sulph. Rept. ung. hyd.*

19th. His eye continues to improve; the deposit is less, and the inflammation has subsided. The pupil is still contracted and fixed, but the colour of the iris improves.

Appl. belladon.

21st. He continues to improve; the iris has resumed its natural colour, except at its under margin, where it adheres to the capsule of the lens, making the pupil contracted at that part—the superior portion of the iris being obedient to light.

Appl. belladon. ℞. *Magn. sulph.* ℥j.

23d. The iris adheres to the capsule of the lens, and the pupil remains contracted. The lens is getting opaque.

Appl. belladonnæ.

Jan. 4th. The iritis is cured; he merely attends at present for the application of the belladonnæ, to dilate the pupil.

Case 25. Martha Watson, æt. 27, admitted Jan. 3d, 1832. Two months back she had ulcer on the nates, buboes in the groin, and ulcerated sore throat, for which she took mercury for a week, and it produced ptyalism, when the chancre and the ulcers in her throat healed, and the buboes in the groin disappeared.

About 14 days since her left eye became very painful; her sight failed her, and there was great intolerance of light; and about eight days back she observed an eruption over her thighs and arms, the throat again ulcerated, and also the ulcer, which now discharges a little. She has applied eight leeches to the eye without benefit.

The conjunctiva is much inflamed, with a zone of vessels surrounding the cornea, the margin of which appears disposed to ulcerate, especially at its superior portion; the cornea is muddy; the iris discolored; pupil fixed and irregular, but not contracted; there is lymph clouding the inferior part of the iris, and great intolerance of light. She suffers acute pain, particularly on pressure, and there is a flow of scalding tears. There is a swelling on the forehead over the right eye, which gives great pain.

℞. *Hyd. subm.* gr. ij. *2dis h. s.*

4th. Her eye is rather better; there is less pain and intolerance of light; the appearance of the eye unaltered. The spots upon the thighs and arms are large, copper-coloured, and scaly; they first came out as small, itching, and irritable pimples, and when they subsided, the eruption assumed the present appearance.

5th. Her eye is a little better; she is free from pain; the flow of tears has abated, and the intolerance of light is less.

The appearance of the eye not changed—her mouth is becoming sore.

℞. *Hyd. sub.* gr. ij. *Ext. opii,* gr. ss. *M. 6tis h. s.*

6th. She continues to improve; her mouth is sore.

℞. *Hyd. subm.* gr. iij. *Ext. opii,* gr. ½, *M. nocte maneque sumenda.*

7th. She is much better; there is not so much conjunctival inflammation, and the flow of tears has ceased; the intolerance of light is much less.—Throat better, chancre healed up, and the swelling on the forehead has subsided. Her mouth still under the effects of calomel.

Cont. pil. bis die.

8th. Her eye improves, the lymph clouding the iris is not so thick as it was; the pupil is more sensible; throat nearly well; bowels affected by the medicine.

℞. *Hyd. subm.* gr. iij. *Ext. opii,* gr. j. *nocte maneque.*

9th. Continues to improve—mouth very sore.

℞. *Hyd. subm.* gr. iij. *Ext. opii,* gr. ½, *nocte.*

11th. Idem. 13th. Still improves.

Rep. pil.

16th. She is much better, the eye being quite free from pain; her mouth is very sore; not any deposit of lymph; but the iris adheres to the capsule of the lens, at its inner and under portion.

Omit. Hyd. sub. Appl. Belladonna.

VII. AMAUROSIS.

Among the cases entered under this head, is one where the patient could only distinguish one side of any object she looked at.

CASE 26.—Sarah Minching, æt. 27, was admitted April 13th, 1832. The patient states that, on awaking one morning, she was surprised to find she could only see the left half of an object; and that it made no difference which eye she looked with, or if she looked with both it was still the same. Her eyesight was perfectly good when she went to bed on the previous night. Works a great deal with her needle—had no unusual quantity of work before this attack—had no pain in the eyes or giddiness—catamenia regular. Was attacked with this affection of the eyes fourteen days since.

℞. *Magn. sulph.* ℥ss. *Ant. tart.* gr. ij. *quaque secunda nocte sumend.*

16th. States that she sees clearer; can see both the left and right side of an object, but the right is very dim and indistinct. Is much affected by a strong light. *Rep. med.*

18th. The dimness is still very great, and she states that her sight is no better than when last seen.

Rep. Mag. sulph. et Ant. tart.

23d. States her sight to be considerably better, and she can distinguish the right side of an object much more distinctly. In the evening she does not feel any inconvenience. *Rep. med.*

25th. Much the same as when last seen—sight not improved. *Cont.*

30th. Has continued the medicine since last report, and is now perfectly recovered—can see both sides of an object distinctly. Discharged.

VIII. CATARACT.

Of the operations for cataract, two were for depression.

CASE 27.—Joseph Procter, æt. 22, Jan. 30th, 1832. Capsular cataract from injury when he was five years old. Mr. Guthrie separated the capsule from its adhesions, and depressed it. Slight attack of inflammation followed, which the usual antiphlogistic remedies overcame; and, on the 4th of February, he was discharged, the cataract having become almost entirely absorbed, and since that period has been completely.

CASE 28.—Edward Collins, æt. 13 months, May 21st, 1832, with capsulo-lenticular cataract of the right eye.

Mr. Guthrie depressed the cataract, and the case did well—was discharged from hospital the following day, and has since gone on very well.

There have been six patients operated on for breaking up the cataract.

CASE 29.—James Stockman, æt. 25, Jan. 27th, 1832. Capsular cataract of the right eye, first noticed ten months since.

Mr. Guthrie separated the adhesions of the capsule with the iris, and broke up the cataract. He was discharged on the 1st Feb. The capsule still seen floating, but it was ultimately absorbed without further operation.

CASE 30.—Edward Madle, æt. 25, Jan. 27th, 1832. Capsulo-lenticular cataract of the left eye, the right eye being perfectly sound. He did not notice the gradual formation of the cataract.

Mr. Guthrie broke up the cataract; partial absorption took place. On the 29th Feb. he was again operated upon; much more of the lens became absorbed after this; but, May 20th, it was necessary again to operate, and the capsule was more freely broken up, and a slight adhesion, which it still had with the iris, separated. The cataract, after this, became so absorbed as not to interfere with vision.

During this last operation, when Mr. Guthrie separated the capsule from the iris, the iris, at that portion, instantly became changed in colour, becoming quite green, and this, on the following day, had spread over the whole iris; so that, as to colour, it had the appearance of acute inflammation.

CASE 31.—Ellen Mills, æt. 15; 1st February, 1832. Soft cataract of both eyes.

Mr. Guthrie operated on the right eye by breaking up the lens. After the operation, a considerable portion was absorbed; but it required that the lens should be further broken up, and, on 29th Feb. the operation was repeated.

On the 5th March she was discharged, and afterwards attended a short time as an out-patient—the lens was completely absorbed.

Case 32.—Thomas Sewiss, æt. 10, February 1st, 1832, with congenital cataracts of both eyes. His father stated that his sight was first affected seven years ago, but that it was only two years since he became quite blind. His mother's father brought him to the hospital, and was affected in a similar manner in both eyes.

Mr. Guthrie broke up the cataracts in both eyes. The cataracts did not appear to have been much absorbed after this operation; therefore, on the 29th February, the operation was repeated in both eyes, after which much more of the lens in each eye became absorbed. But still portions of the hardened capsule required a third operation in either eye; but this was quite successful, the boy's vision being restored by the complete absorption of the cataracts.

Case 33.—Jane Brazier, æt. 5, May 5th, 1832. Congenital cataract of both eyes.

The operation for breaking up the lens and capsule was performed in both eyes. Slight constitutional irritation succeeded the operation, but no local inflammation; she was discharged in a few days, absorption of the cataracts going on rapidly *(see W. Hoole's case).*

There were six operations for extraction of the lens.

Case 34.—Mary Sullen, æt. 65, 1st February, 1832. Hard cataract of the left eye—the right lens is also becoming opake.

Mr. Guthrie extracted the lens, making the section of the cornea upwards. Slight inflammation followed the operation, which was subdued easily; and, on the 6th February, the eye was quite free from inflammation, cornea had united smoothly, pupil regular, and can see with the eye very well.

Case 35.—Sophia Williams, æt. 60, 29th February, 1832, with hard cataracts of both eyes. Cannot see any thing with the right, and but faintly with the left. The cataract was removed from the right eye, by extracting the upper section of the cornea. There was, for several days, some inflammation, but this was subdued, and the eye became quiet, and she was discharged 20th March, and could see pretty well.

Case 36.—Charlotte Richards, æt. 45, March 14th, 1832. Cataract of both eyes, the left more advanced, and Mr. Guthrie removed the hardened lens in the usual manner; the usual after-treatment was adopted, and she was discharged 24th March; but her sight was rather imperfect, on account of chronic conjunctival inflammation.

Case 37.—James Stovey, æt. 72, April 25th, 1832. Had cataract of the right eye. The operation was performed in the usual manner; but on the 2d May, after having gone on well till then, great inflammation was set up from cold; he is now (June 1st) in Hospital, the cornea having suffered from the inflammation, and being opake.

Case 38.—Hariet Highfield, æt. 58, May 4th, 1832. Hard cataract of the right eye—lens of the left becoming opake. The right lens extracted in the usual manner. There was very little after-treatment necessary, the local and constitutional symptoms being mild, and on the 13th she was discharged cured.

Case 39.—David Silver, aged 68, admitted 19th March, 1832, with hard cataract of the left eye, and incipient cataract of the right.

On the 23d, Mr. Guthrie performed the operation of extraction in the usual manner. The operation was succeeded by violent inflammation, and although the lancet was freely used, suppuration ensued. The patient did not complain of any pain during the inflammation.

The next case should have been inserted with those where the cataract was broken up.

Case 40.—W. Hoole, æt. 67; March 2d, 1832. Mr. Guthrie broke up a capsular cataract of the left eye, which the patient had noticed only for six months, then followed considerable fever and local inflammation, and, on the 28th of May, the report states there is still slight conjunctival inflammation; the pupil is clear, and his sight improving daily. He was then discharged.

CASE 41.—There was one case of milky cataract. The patient, a man of the name of Evan Davies, was operated upon on the 2d March, 1832; but he will require a further operation before he recovers the use of that eye.

We conclude with a list of the patients who have attended at the Institution from the 1st January to the 1st of June; their diseases are specified as well as the numbers in the different months. We shall endeavour in future to give a Quarterly Report from this useful Institution, and to render it as accurate and conducive to the dissemination of ophthalmic knowledge as possible.

REPORT of the PATIENTS attending the ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, from January 1st to June 1st, 1832.

DISEASES.	Jany.	Feby.	March.	April.	May.	Total.
Amaurosis	3	11	7	11	6	38
Amblyopia	..	4	3	8	4	19
Cataract	2	7	7	4	8	28
Chemosis	1	1	..	..	..	2
Catarrhal Inflammation	15	24	22	40	41	142
Cornea, Inflammation of	2	5	2	6	6	21
———, Ulceration of	9	6	5	2	4	26
———, Pustule of	6	5	1	2	4	18
———, Opacity of	1	2	5	1	3	12
———, Chronic Inflammation of	3	3	..	1	4	11
———, Specks on	5	10	10	11	12	48
———, Conical	..	1	..	..	..	1
Conjunctival Inflammation	10	23	22	16	12	83
Chronic Ophthalmia	1	1	1	5	3	11
Disorganization	2	4	..	1	..	7
Eye-Ball, Protrusion of	1	..	..	..	..	1
Eye-Lids, Inflammation of	8	19	17	11	14	69
——— Tumour of	2	1	..	4	2	9
Iris, Inflammation of	3	2	7	1	..	13
—, Prolapsus of	1	..	..	..	1	2
Glaucoma	1	1	..	2	1	5
Hypopium	..	1	..	..	..	1
Choroid Coat, Inflammation of	..	..	1	..	..	1
Lachrymal Sac, Inflammation of	1	..	1	..	..	2
——— Duct, Obstruction of	2	..	..	3	3	8
Lens, Prolapsus of	..	..	1	..	..	1
Interstitial Abscess of Cornea	3	..	1	1	2	7
Pustular Inflammation	3	12	13	1	3	32
Purulent Ophthalmia	2	4	5	..	2	13
Sclerotic Coat, Inflammation of	..	..	1	..	..	1
Staphyloma	1	3	1	1	6	12
Strumous Ophthalmia	2	..	1	9	10	22
Varicose Veins of the Orbit	1	..	..	..	..	1
Injuries to the Eye	..	..	..	6	8	14
Affection of Portio Dura	..	..	..	1	..	1
Pterygium	..	..	..	1	..	1
Strabismus	..	..	..	1	..	1
TOTAL						684

LXXXVI.

CHOLERA IN THE SHIP BRUTUS.

THE outbreak of the epidemic in the above unfortunate vessel, exceeds in fatality any thing that has yet occurred in England. A vessel of about 300 tons contained 330 passengers, most of whom were in a state of great poverty, being ill clothed, and not having provisions for half the voyage, was attacked with the epidemic on the 10th day (one account says the 8th) after sailing from Liverpool; and, in a few days, 81 out of 117 fell victims. The passengers were entirely paupers, and it appears that the weather, when the epidemic was at its height, was hazy and tempestuous. The state of crowding, the condensation of human effluvia, the scanty food, and the great deficiency of clothing, account, in a great measure, for the fatality of the attack. Those only who have seen ships with emigrants for America, can form an idea of the misery and crowding, and bad air at night, when the hatches are closed, and the people all in the 'tween decks. It required, however, an epidemic influence to render such a place a lazar house.

LXXXVII.

THE LATE DR. DILL.

IT is with deep regret we announce the death of this talented and zealous young physician, cut off in the flower of his age and faculties, and while contributing largely to the extension of science and the diffusion of knowledge by his active mind and pen. Dr. Dill was the son of a highly-respectable clergyman in the county of Derry, and a graduate of Edinburgh. He had been several years resident medical officer in the Fever Hospital, pursuing his clinical and physiological researches with great ardour, and contributing largely to many periodical and other works, though his name seldom appeared. During the last four years, Dr. Dill had a regular engagement in the review department of this Journal. The last article from his pen, was the extended review of Dr. Bright's "Reports of Medical Cases."

The profession is aware that Dr. Dill took an active and zealous part in the investigation of the epidemic cholera in this metropolis—the more so as he was the author of a distinguished article on that subject in the Foreign Quarterly Review, where he gave a fair statement of the case, though leaning somewhat to the doctrine of contagion. In the midst of this investigation, Dr. Dill was seized with typhoid, or rather petechial fever, caught, apparently, from some patients labouring under the same disease in the hospital; and, although every effort was used by his medical friends and attendants, this amiable and promising young physician died on the 15th day from the commencement of the attack. We, who had ample means of knowing Dr. Dill's character and attainments, have the deepest cause to mourn his premature death! His labours are terminated, but his memory will long be cherished by all those who had the pleasure and advantage of his acquaintance.

LXXXVIII.

MEDICAL CONSTITUTION.

OUR observations induce us to think that a gastro-enteric diathesis or constitution is now forming in this country, or, at all events, in this metropolis, similar to that which commenced about the same period (June) of last year—and that, if heat and moisture alternate, as of late, we shall probably have another brush of cholera or cholerine, this Summer and Autumn. We have observed a preternatural irritability of the alimentary canal, for some weeks past, in consequence of which, slight errors of diet, exposure to cold, or even mental perturbation, bring on diarrhœa, ending occasionally in well-marked cholera, so called. Within these few days two individuals died in the Haymarket, presenting all the features of the recent epidemic. One of them (a female) had not been out of her room for many months previously. She was seized, after eating food of difficult digestion, with diarrhœa, which, in 24 hours, rose to cholera, and killed her in 12 hours. The other (a foreigner) ate heartily of pease-soup and mackarell—was seized with sickness and purging, ending in fatal collapse. Even an irritating dose of physic, in health, risks an attack of cholera. We trust that, should the epidemic again become prevalent, our public institutions will not be shut against the sick poor. Our prejudices on this head have made us the laughing-stock of enlightened Europe.

22d June, 1832.

LXXXIX.

Dr. Seeds' Ophthalmic Lotion.

Since our last, Dr. Seeds has shewn us some cases in which he used this lotion, the composition of which is mentioned in our last Number. In all it was productive of much benefit, particularly in the instance of a gentleman who had received a wound in the eye in Albania, and who had partial staphyloma.

Dr. S. is now in his 77th year, and we are sure that the benevolent feeling which prompts him to devote much time and trouble to the employment of a remedy which he believes to be advantageous, cannot fail of obtaining admiration.

BIBLIOGRAPHICAL RECORD;

OR,

Works received for Review since the last Quarter.

1. The Dissector's Guide; or, Student's Companion. Illustrated by numerous Wood-cuts, clearly exhibiting and explaining the Dissection of every part of the Human Body. By Edward William Tuson, F.L.S. &c. Small 8vo, boards, pp. 219. Wilson, London, 1832

☞ *Mr. Tuson's myological and other anatomical works are already such favourites with students, that we do not doubt his success in the present attempt. We have looked over this Dissector, and we think that the wood-cuts which illustrate the description and explain the directions are likely to prove extremely useful to the young dissector. The price is very moderate—nine shillings. We should mention that the work contains the methods of securing the different arterial trunks, and a brief account of the fractures and dislocations, &c.*

2. An Account of Cholera and Cholera Fever, as they existed at Rochester and its Vicinities, in the Year 1818. Published at that time by the late Walter Vaughan, M.D. Licentiate of the College of Physicians of London. Octavo, stitched, pp. 54. 1832.

☞ *We may notice this.*

3. Observations on some diseases of the Vascular System. Essay I. Diseases of the Veins. Essay II. Diseases of Capillaries. By Thomas A. Wise, M.D. Bengàl Medical Service, &c. Octavo, stitched, pp. 96—23. Calcutta, 1831.

☞ *This we shall also take an opportunity of noticing.*

4. The Mother's Medical Guide; containing a Description of the Diseases incident to Children; with the Mode of Treatment, as far as can be pursued with safety, independently of a Professional Attendant. By the late Robert Bradford and H. O. Bradford, M.R.C.S. &c. Octavo, stitched, pp. 96. Price 3s. 6d.

5. The Principles and Practice of Obstetric Medicine, &c. By David D. Davis, M.D. &c. Part VI. Price 2s. One Lithographic Plate.

☞ *This shall be noticed in the Periscope Department of the present number.*

6. Hyperanthraxis; or the Cholera of Sunderland. By W. Reid Clanny, M.D. F.R.S. E. &c. Octavo, pp. 149. London, 1832.

7. Two Lectures on the Circulation, Respiration, and Mode of Nutrition in Animals and Plants, &c. Delivered before the Chesterfield Literary and Philosophical Society. By W. H. ROBERTSON, M.D. Octavo, stitched, pp. 32. Price 1s. 6d.

☞ *A popular and interesting view of what is an interesting, and should be a popular subject.*

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8. A Practical Treatise on Uterine Hæmorrhage in connexion with Pregnancy and Parturition. By JOHN T. INGLEBY, M.R.C.S. Lecturer on Midwifery at the School of Medicine at Birmingham, &c. 8vo, pp. 276. London, 1832.

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9. On the Nature and Cure of Glandular Diseases, especially those denominated Cancer, with the Mode of Treatment; and on the too frequent use of Mercury, &c. Also, on Organic Affection of the Stomach, with a few Remarks on Cholera, &c. By Sir CHARLES ALDIS, Surgeon and Accoucheur, &c. Octavo, pp. 116. London, 1832.

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10. Histoire Générale et Particulière des Anomalies de l'Organization chez l'Homme et les Animaux. Ouvrage comprenant des Recherches sur les Caractères, la Classification, l'Influence, Physiologique et Pathologique, les Rapports Généraux, les Lois et le Causes des Monstrosites, des Varietés, et Vices de Conformation, ou Traité de Tératologie. Par M. ISIDORE GEOFFROI SAINT-HILAIRE, Docteur en Médécine, &c. Tome 1er, pp. 746, avec Atlas, in 8vo, xx. Planches. Paris et Londres, chez Baillière. 1832.

☞ *We shall notice this able production.*

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11. Substance of the Investigation regarding Cholera Asphyxia: with Cases and Dissections, communicated by Professor Delpech, and Dr. Coste of Montpelier, and Dr. Lowenhayn of Moscow, during their Residence in this Country. To which are added, Observations on the Disease in Edinburgh, and the neighbouring Districts, with numerous Cases and Dissections. By JOHN LIZARS, &c. 8vo, stitched, pp. 72. Edinburgh, 1832.

☞ *This will be noticed in the Periscope of the present number.*

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12. Observations in Surgery and Pathology; illustrated by Cases, and by the Treatment of some of the most important Surgical Affections. By WILLIAM JAMES CLEMENT, Surgeon. 8vo, pp. 230. London, 1832.

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13. A Report of the Royal Dispensary for Diseases of the Ear, Dean Street, Soho Square, from 1817 to 1830. 8vo, stitched, pp. 44. London, 1832.

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14. On the Enlisting, the Discharging, and the Pensioning of Soldiers. With the Official Documents on the Branches of Military Duty. By HENRY MARSHALL, Deputy Inspector General of Army Hospitals. 8vo, pp. 243. London, 1832.

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15. A Practical Treatise on the Forms, Causes, Sensibility, and Treatment of Pulmonary Consumption. By EDWARD BLACKMORE, M.D. Physician to the Plymouth Public Dispensary. 8vo, pp. 242. London, 1832.

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16. Practical Observations upon the Epidemic Cholera at Cork. By D. B. BULLEN, M.D. one of the Physicians to the North Cholera Hospital, &c. 8vo, stitched, pp. 28. London, 1832.

☞ *A sensible pamphlet. We have made an extract from it in another place.*

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17. Surgical Pathology. A Thesis. By JULES CLOQUET. Translated from the French, by J. W. GARLICK, and W. C. COPPERTHWAITE, M.R.C.S. &c. With Plates. Highley, London, 1832.

☞ *We shall take some notice of this useful little work.*

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18. Medicina Simplex, or the Pilgrim's Way-book; being an Enquiry into the Moral and Physical Conditions of a Healthy Life and Happy Old Age. With Household Prescriptions. By a Physician. 12mo, pp. 254. London, 1832.

☞ *This little work displays good feeling, good sense, and a well-stored mind.*

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19. On Health, and the Means of preserving it. A Treatise, in Two Parts, Philosophical and Popular. With an Appendix on Cholera. 18mo, pp. 120. Dundee, 1832.

☞ *A very sensible production by one who, we have reason to know, is the possessor of no inconsiderable talents.*

20. Harveian Oration for 1832; being the Discourse read before the Harveian Society of Edinburgh, on the Fiftieth Anniversary of its Institution. By Rich. Huie, M.D. Fellow of the Royal College of Surgeons, &c. 8vo, stitched. Edinburgh, 1832.

21. Part VII. of the Principles and Practice of Obstetric Medicine, &c. By David D. Davis, M.D. &c. Price 2s. Taylor. London, 1832.

22. A Manual of Percussion and Auscultation. Composed from the French of Meriadic Laennec. By James Birch Sharp, M.R.C.S. Duodecimo, pp. 120. Highley. With a Plate. 1832.

☞ *We can strongly recommend this as one of the best and most portable Vade Mecums of Auscultation that has yet appeared.*

23. Outlines of Medical Botany; comprising Vegetable Anatomy and Physiology, the Characters and Properties of the Natural Orders of Plants, an Explanation of the Linnæan System of Classification, and Tables of Medicinal Plants, arranged in their Linnæan and Natural Orders. By Hugo Reid, Member of the Royal Physical Society and of the Society of Arts, Extraordinary Member, and lately President of the Hunterian Medical Society of Edinburgh. Duodecimo, pp. 390. Edinburgh, 1832.

24. An Essay on the Epidemic Cholera; being an Enquiry into its New, or Contagious Characters; including Remarks on the Treatment; as likewise Tables of the average State of Disease and Mortality, recently occurring in London. By John Webster, M.D. Member of the Royal College of Physicians, London; Physician to St. George's and St. James's Dispensary, &c. 12o, pp. 220. Lon. 1832.

25. The Anatomy of the Brain, with some Observations on its Functions. By Alexander Monro, M.D. To which is prefixed, an Account of Experiments on the Weight and Relative Proportions of the Brain, Cerebellum, and Tuber Annularæ, in Man and Animals, under the various circumstances of Age, Sex, Country, &c. By Sir William Hamilton, Bt.

☞ *Dr. Monro's Anatomy of the Brain, like all his other compositions, is distinguished by the fairest characteristics of disinterestedness and didactic excellency: hereafter, we shall enable our readers to estimate the debt of gratitude they owe to the illustrious Professor, for this additional contribution to the art of anatomy; and especially for his account of the "new and valuable discoveries" of his "much esteemed colleague," whose previous discoveries we may, at the same time, illustrate with analogical excerpts from "experiments on the cauda radicula, and tuber annularæ, in the turnip and potatoes, under the various circumstances of age, sex, country, &c. by Sir Louty Bumpkin, knight."*

26. An Exposure of the Unphilosophical and Unchristian Expedients adopted by Anti-phrenologists for the purpose of obstructing the moral and philanthropical Tendencies of Phrenology; being a Review of "Anti-phrenology; or, Observations to prove the fallacy of a modern Doctrine of the Human Mind. By John Wayte, M.D. "He that disapproves of plain dealing with defamers, might as justly deprecate ungentleness in strangling a ruffian."—*Censorinus.* 8vo, pp. 198. London, and Edinburgh, 1831.

☞ *Dr. Wayte's "Observations" are here examined page by page, paragraph by paragraph, sentence by sentence, and refuted; their unfairness and fallacy are condemned by multiplied evidences; and their spirit is rebuked with the severity due to extraordinary misrepresentation.*

27. Annals of some remarkable Aerial and Alpine Voyages, including those of the Author, &c. By T. Forster, M.B. F.L.S. &c. Octavo, pp. 118, sewed, 1832.

☞ *This pamphlet of Dr. Forster's contains much curious and interesting information, which we hope to notice in our next Number.*

NOTICE TO CORRESPONDENTS.

The letter respecting an unfair review of Mr. Ingleby's work on Uterine Hæmorrhage, from an old correspondent in the West, has been received, but we cannot notice the criticisms of other journalists. The best antidote to the poison will be found in a full and fair analysis of Mr. Ingleby's valuable work, which will be concluded in our next number.

THE

Medico-Chirurgical Review,

No. XXXIV.

JULY 1, TO OCTOBER 1, 1832.

I.

PRACTICAL OBSERVATIONS IN MIDWIFERY, WITH A SELECTION OF CASES. Part II. By *John Ramsbotham*, M.D. &c. &c. Octavo, pp. 507. Highley, July, 1832.

NEARLY ten years have elapsed since we presented our readers with an account of the first part of the work, whose completion is now before us. The delay, our author observes, need not cause regret in the mind of the reader, since it has enabled the author to verify, by a more extended observation, the correctness of those principles, on which the practice should be grounded in the different emergencies. The author has been gratified by the re-publication of his former work in America, under the superintendence of that experienced physician, Dr. Dewees, and, in gratitude, dedicates the present volume to him and to Sir C. M. Clarke. He informs us that his Observations are confined to practical points, and that he has abstained, as much as possible, from theoretical discussions. This, we think, is a wise course, more especially in midwifery matters. In imitation of our author, we shall proceed at once to give an analytical sketch of some of the chief practical points discussed in this volume, particularly the subjects of breech and shoulder presentations, uterine hæmorrhage, puerperal convulsions, twins, abortion, and retroversion of the uterus.

I. *Breech Presentation.* The average occurrence of this may be roughly calculated at 1 in 30, independently of those which are made breech presentations by artificial turning. There are no signs, during pregnancy, by which we can recognize this particular location of the child.

"The commencing symptoms of labour also resemble those under a natural case, but they frequently proceed more slowly; the uterine contractions being, on the onset, shorter and more distant, so that a slighter impression is made on the maternal passages in a given time, and the descent of the presenting part is more gradual. The os uteri relaxes and opens, through which the membranes protrude; their bag in due course gives way, and the liquor amnii is discharged. The breech is afterwards pushed down by the increased impulse of uterine action; during its descent, its several parts are naturally accommodated to the pelvic cavity; at length, whether the belly or the back of the child is looking towards the mother's spine, one of the nates, taking the precedence of its fellow and

> assuming a conical shape, begins to distend the external parts. After considerable extension, the breech makes its exit, with one hip inclined towards the pubes, with the other towards the anus. The legs are presently set at liberty, and the trunk is expelled with one side under the pubes; with the other in the sacrum." P. 6.

By examination per vaginam, the breech will be detected, even at or above the brim of the pelvis, by its softness and roundness—by the absence of the cranial resistance—and the inability to define the sutures; and, as labour advances, the anus and genital organs may be detected by the finger; and usually some meconial matter escapes with the other discharge from the passage. In the generality of cases, Nature, unassisted, and uninterfered with, will complete the delivery; it is only in expediting the expulsion of the head, in order to prevent any protracted pressure upon the umbilical cord, that the assistance of the accoucheur may be necessary; and his most important duty is to direct the position of the head, so that it most easily accommodates itself to the diameters of the pelvis;—when it is placed diagonally, or laterally at the outlet, we must carefully turn it somewhat round, till the face lies in the hollow of the sacrum. But occasionally the cause of the detention is at the brim; and then the following directions given by Dr. Ramsbotham must be attended to.

> " If it should be found, as is frequently the case, that the long diameter of the head is opposed to the conjugate diameter of the pelvis, that the forehead or the occiput is directed to the projection of the sacrum, such position of the head must be changed for reasons too obvious to mention, and the face must be made to assume a lateral or a diagonal direction. In that direction, the head must be gradually and cautiously drawn through the upper strait. When it has cleared the upper strait, and has gained possession of the pelvic cavity, its relative position must be again changed, by the inclination of the face into the hollow of the sacrum." 11.

It is well known that the state of the circulation in the umbilical cord is to be the rule of our practice in expediting the delivery of the head, or not. Occasionally we observe, that when the body of the fœtus has been expelled, but the head still remains in the vagina, that the abdomen and thorax distinctly heave several times, indicative of an obstructed transmission of the blood, and of an attempt to establish the new function of respiration. Such cases require prompt release; else the child will be lost. We are glad to find that so experienced and talented a practitioner as our author strongly inculcates the advantages of not hastening by any manual attempts, or otherwise, the early stages of breech cases;—if slowly and gradually completed, the parts are sufficiently distended and relaxed by the protruding conical bag of membranes to permit the head, the most bulky part, to pass without much difficulty;—an impatience or officiousness are the worst enemies of speed in midwifery. Cases however occur which require the assistance of the bent finger or of a blunt hook being carried over one of the groins, with which traction downwards must be cautiously made; and if, unfortunately, such deformity exists, as to preclude the exit of the head, without considerable danger to the mother, we are obliged, after bringing the body and arms down, to perforate the cranium. With this intention, the nape of the neck must be brought close under the arch of the pubes, and two fingers being carried as high as possible against the occipital bone, to direct and guard the perforator, an opening must be made by a semi-rotatory motion of the instrument; the contents of the skull evacuated, and a crotchet, or blunt hook, be then inserted upon its base;—in withdrawing the disfigured head, it is a matter of great importance to accommodate its different dimensions to the capacities of the pelvis. Where improper force has been used in delivering a breech presentation, the body has been sometimes separated from the head, and this left behind in the uterus; to remove it, let the uterine tumour be steadied by an assistant; and having introduced the left hand within the womb, and placed the fingers against some part of the head, the point of the perforator must be cautiously directed to it, and the operation finished as usual.

In such difficult cases of breech delivery, the removal of the placenta is usually attended with some trouble. We shall illustrate the above remark, by transcribing a few of the judiciously selected cases from the present work, whose chief and distinguishing merit (and that in the present day of authorship is not a small one) consists in a faithful and well-told narrative of events, as they occurred at the bed-side;—and as the examples always bear the impress of unvarnished genuineness, the reader feels gratified and instructed by perusing them, and is led thereby to reflect how he himself should act in such and such emergencies. We shall not, however, here anticipate our judgment of Dr. Ramsbotham's book, or commend it too highly to our obstetrical readers, before we have conducted them through its contents, and displayed its stores before them.

An ordinary difficult Breech Case.

" At 10, p. m. August 13th, 1821, I was summoned by a note from one of the midwives of the Royal Maternity Charity, to attend a poor woman in the parish of St. Luke, Old Street, which stated, " that the woman was in labour of her first child with a breech presentation; that the scrotum of the boy was out of the external parts, and so swelled, that she was afraid it would burst; and that the vagina was very rigid and would not give way." Upon attending to this call, I found the case as above stated, and that no advance had taken place for many hours; the breech was certainly in the pelvis, yet not very low, although the scrotum was external. The general appearance of the woman, connected with the other circumstances of the case, induced me to attempt to get down a leg, by hooking a finger over the groin; but in that attempt, I was completely foiled. The failure therein arose partly from the breech being situated too high to allow by means of my finger a sufficient purchase, and partly from the parts being jammed at the brim of the pelvis. I, therefore, had recourse to the blunt hook, and having passed it over one of the groins of the child, I proceeded to make extraction; but I was obliged to use a very considerable share of force before I could procure any descent. By perseverance, however, I succeeded in extracting the breech; the rest of the child followed afterwards in the usual manner. The child was still-born.

The difficulty here arose from the impaction of the breech within the pelvic brim, which was narrow in its general dimensions." 29.

A Case of Difficulty produced by improper Attempts at Extraction of a Breech Presentation.

" At 6, a. m. Tuesday, March 28th, 1820, I was called in a hurry to the assistance of a lady in Broad Street, who had been some time in labour under a breech presentation. On my arrival at her bed side, I found the breech and trunk external as far as the axillæ; but the arms, shoulders, and head were in the pelvis, or above its brim, and all the efforts of her medical attendant had hitherto been unsuccessful in bringing them down. In this situation they had remained for more than an hour; of course the child was already deprived of life. Upon making an examination, I soon discovered the cause of failure in my predecessor's attempts. He had got the head locked in the pelvis with the occiput behind the pubes, and with the chin to the sacrum. By a little inclination of the trunk sideways, by which the relative situation of the shoulders and head was somewhat changed, after some trouble, I was enabled to release the arms by means of my fingers; afterwards changing the position of the face, I brought the head through the pelvic brim; but that act required the exertion of considerable force, as the projection of the sacrum was unusually prominent. Notwithstanding the difficulties attendant upon the delivery, the lady recovered without any subsequent inconvenience." 39.

A very difficult Breech Case, from Deformity of the Pelvis.

"About noon, Wednesday, November 9th, 1814, I was called to the assistance of Mrs. M. in Finsbury district, in labour of her first child, a woman of low stature, and about forty years of age. Her labour-pains had commenced on the evening of the Monday preceding, and soon afterwards her medical attendant was summoned, who had been with her the greater part of the intermediate time. On examination, I immediately detected the breech lying above the brim of the pelvis; which, as far as I could judge from the nicest measurement I could make, did not possess a space equal to two inches from pubis to sacrum. As the os uteri was but little dilated, and the woman's strength not much impaired, I merely recommended for the present an occasional enema. I visited this patient again at six in the evening; at this hour, the os uteri was become a little more open, as well as more flaccid; the labour-pains were more forcing; but no descent of the breech could take place for want of space. Seeing no possibility of improvement, I now determined upon immediate delivery, which I foresaw would be a task of no little difficulty. Having introduced my left hand within the vagina, I passed its fore-finger over one of the groins of the child, and upon it I insinuated a blunt hook, which gave me an excellent purchase. After exerting a good deal of force, I managed to get down the leg of that side. I then carried the blunt hook over the other groin, and got down the other limb in a similar manner. The possession of the legs enabled me to extract the trunk as far as the axillæ. The arms were at this time drawn up on each side of the head; with some difficulty, I carried the blunt hook over one of these, which enabled me to bring it down. I proceeded in a similar manner with the other arm; but the most difficult part of the delivery I had yet to encounter in the extraction of the head; for it was impossible that the head could pass entire through such a pelvis, and it seemed to me to be no easy matter to perforate it. After a careful enquiry into its exact position, I brought the occiput close behind the pubes; then passing the two fore-fingers of my left hand against the under part of the occipital bone, with the perforator, I made a large and free opening through the skull into the brain. Within this opening I inserted the blunt hook, and getting thereby a very firm purchase upon the base of the skull, by the continuance of the extractile power it afforded, under the exertion of which the contents of the cranium were largely expelled, I succeeded in extracting the head. The placenta followed immediately. The next day the woman had procured refreshing sleep during the night; had passed urine; and, indeed, seemed as comfortable as if she had undergone no unusual inconvenience. She ultimately recovered as well as after the most natural labour, and is still living." 34.

Our author next leads us on to the consideration of shoulder-presentations, or, as they are vulgarly termed "cross-births." No satisfactory indication of such irregularity before labour begins is known; probably the abdomen may be broader from hip to hip than usual, with a diminution of extension upward; occasionally certain, not easily described feelings are experienced by the woman, which lead her to suspect something strange and uncommon; but assuredly she is much more frequently wrong than correct in such apprehensions and presentiments. The labour commences as in a natural case, but it proceeds very tediously; for although the pains may be vigorous and regular, little progress is made; the presenting part does not proportionally descend, but continues to occupy the brim of the pelvis:—even by manual examination it is not very distinctly detected at first, unless indeed an elbow or a hand have slipped well down. But the difficulty of the diagnosis must awaken the more attention and care, in order that, if possible, the nature of the case may be ascertained before the membranes burst; for no sooner do the waters escape, than the pains generally become more powerfully detrusive, and the parietes of the womb more closely embrace the body of the child;—to trust to Nature completing the process in this presentation, is to sacrifice the life of our patient; the cases being very rare, where, in consequence of the ample dimensions of the pelvis, and the comparatively small size of the child, this has been squeezed through with much difficulty, and after great suffering. The observations of the author we know to be so practically important, that we cannot do better than transcribe them.

> "Every case, in which the presenting part does not readily come within the range of the finger, especially after the establishment of pains and relaxation of parts, ought to receive an unusual share of watchful attention. For that circumstance ought to excite a justifiable suspicion, that some other part of the child except the head, may be placed at the brim of the pelvis. And until that point is satisfactorily cleared up, the mind is kept in a state of anxious suspense, with regard to the subsequent management of the case. During this interval, it is a matter of some moment to preserve the bag of membranes unbroken, as long as possible. The bag may by accident be inadvertently ruptured under an examination; but to prevent that occurrence, the necessary enquiries may be made in the absence of uterine contraction, under a flaccid state of membrane; they ought not to be frequently repeated, at least for the present.
>
> Under such a state of uncertainty, I consider it to be an indispensable duty on the part of the accoucheur, either to remain in the house of his patient, or to be within instant call. I have known a breach of attention to this important maxim to be followed by the most serious consequences. The membranes have suddenly given way during his absence; he has lost the momentary opportunity of delivering his patient by turning; the pains have become urgent and forcing before his arrival, and the woman has had subsequent difficulties and dangers to encounter, which timely aid would certainly have prevented." 45.

The importance of being able to ascertain the presentation of the child, before the rupture of the membranes, cannot be too urgently impressed; for by adroitness the accoucheur is sometimes able so to poise the child, still floating freely in the water, upon his finger, as to push up the projecting part, and thus bring the head round to the os uteri. That most dexterous obstetrical operator, Dr. Hamilton of Edinburgh, inculcates the possibility of this manœuvre in his lectures. We need not describe the process of turning, and shall satisfy ourselves by alluding to a very embarrassing difficulty which sometimes occurs. Suppose that one or both feet have been brought down, while the shoulder and chest are still protruding—the descent of the breech and trunk is thus prevented; and our object must be to push the shoulder out of the way, while at the same time we continue pulling the legs; but frequently it is exceedingly difficult to retain hold of them, partly in consequence of their being so slippery, and partly from the weariness, and numbness of the operator's hand. In such cases let a noose of strong tape be put round the ankle, by which traction may be made, while we endeavour to raise the obtruding shoulder;—a steady and cautious perseverance in this method will almost always enable us to succeed.

In those most difficult and dangerous cases, when the hand cannot safely be introduced into the uterus, from its closely grasping the fœtus, it is necessary either to separate the head from the trunk, by dividing the neck by means of a strong hook, having its internal surface ground to a cutting edge; or to perforate the chest, and to eviscerate its contents and those of the abdomen: the crotchet may be then applied within the pelvis, and the child gradually withdrawn. Dr. Ramsbotham decidedly objects to the practice of twisting, or cutting off the projecting arm; on the ground, that when this is done, the delivery will be very little facilitated, and such a confusion is produced within the vagina, as to make it almost impossible to discriminate the parts of the child from those of the mother. In shoulder-presentations, a change in the position of the child is sometimes, although very rarely brought about by the unassisted efforts of the uterus itself. The process was first noticed by the late Dr. Denman, and designated by him the "spontaneous evolution of the fœtus:" he does not appear, however, to have correctly understood the mode in which this was effected; and we are indebted to Dr. Douglas of Dublin for the most satisfactory explanation. The following description by our author conveys a very good idea of it.

> "The arm, shoulder, and chest, are propelled downward by uterine action; the strength and continuance of which direct the apex of the shoulder under the arch of the pubis, while the chest and part of the trunk are occupying the cavity of the pelvis. During this time, the trunk is undergoing a considerable diminution in its original bulk by the bending of the back, and the doubling of the belly; there is also some change of position in the different parts of the child. These advantages permit the entrance of the breech at one side of the brim of the pelvis; then the continued action of the labour pains pushes that part lower and lower, till it gains possession of the hollow of the sacrum; after which, it is gradually expelled under an unusual degree of personal suffering, and of perinæal extension. Under this process, the life of the child is generally destroyed by the violence of the expulsive efforts." 58.

To illustrate the preceding remarks we shall select a few of the cases.

A very Difficult Preternatural Case; the Shoulder Presenting.

"About 10 at night, February 22d, 1809, I was called to the assistance of a respectable woman, in Fleet Street, the mother of several children, who had been in labour all the day under the care of her usual medical man. The membranes had given way about four in the afternoon, when a hand came down; upon which an attempt was made to turn the child which proved unsuccessful; and similar attempts had been made in the interval. A considerable time had been wasted in quest of a particular accoucheur, who could not be found; and between nine and ten, the husband came to my house. On an examination, I detected the shoulder at the brim of the pelvis; both hands, with the funis without pulsation, down in the vagina; the uterus firmly contracted upon the child, and the pains violent and expulsive. I made an attempt to introduce my hand within the uterus, and after some perseverance, I did partially succeed, yet not to that extent as to command a foot; but, after some time, my hand became so cramped, and so completely useless, that I was obliged to withdraw it. I now thought of decapitation, but how to accomplish that act, I at that time scarcely knew. The late Dr. Combe had shewn me, a short time before, a pair of decapitating scissars, which he considered well adapted for that purpose; I procured that instrument, but I found it in my hands entirely useless; being unable to surround the neck of the child. We then determined to call in Dr. Combe himself, under the idea, that he might use his own instrument more dexterously. Upon his arrival about midnight, he made an attempt to decapitate, but was also foiled. Upon this Dr. Combe introduced his hand partially within the uterus, and after much perseverance, he got a finger over one of the hams, and fixing there a blunt hook, he brought down a foot to the brim of the pelvis; being now sufficiently tired, he returned the management of the case to me. Seizing this foot I gradually got down the leg; and making my purchase downward by the leg, at the same time, with my other hand pushing up the shoulder, I at length succeeded in bringing down the breech, and in finishing the delivery. Doctor Combe was nearly two hours in effecting the first part of the operation, yet there was no appearance of blood, and the pains were strong throughout. The next day this woman, notwithstanding the length and degree of her sufferings, appeared uncommonly well, and recovered as soon as after any of her previous labours. 68.

It appears that it has been only within the last 12 or 14 years that Dr. Ramsbotham has been in the habit of perforating the chest in difficult cases of shoulder presentation. Previous to that time he was not acquainted with the practice, and resorted either to turning, although that operation was frequently very dangerous to the mother, or, in extreme instances, to decollation. He is now quite satisfied of the superior facility and safety of diminishing the bulk of the projecting part by opening the thorax, and discharging its contents. We may have less scruple to follow his example, as the life of the child is very rarely saved under any practice. Should any deformity of the pelvis exist, so as to prevent the easy expulsion of the head, it may be necessary to perforate it under the occipital bone, and afterwards, by the assistance of the crotchet, to finish the delivery. The following case is a very valuable one, and although very lengthy in narration, is worthy of study by all.

"*A Shoulder Presentation under a high degree of Uterine Contraction, delivered by Perforation of the Chest, and subsequent Decollation.*

"Mrs. D. fell into labour of her second child in the early part of the day of Wesnesday, September 29th, 1819. Her former labour had been slow and protracted, but it was at length safely terminated by the natural agents, under the care of a respectable midwife. For her present confinement, she determined to engage a male practitioner, and unfortunately selected one, whom the sequel will shew to have been quite undeserving of her confidence. The doctor (as he was termed) was soon informed of the commencement of her labour, and paid her a visit; but as the pains seemed then trifling, and as he lived in the neighbourhood, he did not remain long in the house, but went about his regular business. Some time after his departure, the membranes broke, and he was recalled about one o'clock in the day. Upon his return, he found a hand down in the vagina, with the shoulder at the brim of the pelvis; he made an immediate attempt to turn the child, but in this attempt he proved unsuccessful; attributing his failure to strong uterine action, and to want of room at the brim of the pelvis. After the lapse of a short time, he made a second attempt, in which he was also foiled. He now gave the woman a large dose of laudanum, and while she was supposed to be under its influence, this active practitioner made a third essay, which proved equally unsuccessful as the preceding ones. Not at all daunted by these repeated failures, and apparently determined to effect his object, towards night he repeated the dose of laudanum, after which he made several more ineffectual trials during the night, and even to the time now to be mentioned; a little before which, he confidently asserted that the child was coming. About five o'clock on the Thursday morning, the husband called me out of bed, and requested my immediate attendance upon his wife in a case of difficult labour. From his imperfect statement of the facts even, I was led to suspect, that I should have some difficulties to encounter in delivering the woman; but little did I then suppose they would have proved so formidable as I really found them.

Upon my entrance into the lying-in room, the poor woman, under a state of considerable exhaustion, bitterly bewailed the severe sufferings to which she had been obliged to submit for more than *sixteen* hours; and at the same time pitifully implored my assistance in her behalf. I found the left hand quite external, swelled, and discoloured; the arm in the vagina highly tumefied; the shoulder and part of the chest firmly impacted at the brim, and in the upper part of the pelvis, which was somewhat deficient in the usual room at the promontory of the sacrum; and the woman's parts swollen and tender. Besides, the uterus was so entirely embracing the child, that a finger could with difficulty be inserted between the two. The uterine tumor was extremely tender under the hand, comparatively small and firm; there was still an occasional tendency to uterine action, but in a slight degree. In the early part of the labour, the pains had been unusually strong and active; at this time, that activity was much diminished; and the constitutional symptoms were beginning to be alarming. Under these discouraging appearances, I could offer little hope of affording such assistance as would be the means of preserving the woman's life; as for that of the child, it was already gone.

The high degree of tonic contraction, which the uterus had already acquired, convinced me of the impropriety of any further attempts to deliver by turning; nay, even of the impossibility of the act, without the exertion of such violence as would endanger the structures engaged therein. Having determined that point, I had to devise some other mode, by which delivery might be accomplished; and decollation, or perforation of the chest seemed to me the only means of effecting that object. But before I had recourse to either of these unusual modes of practice, I was desirous of procuring the sanction of some other experienced practitioner. I therefore appealed to a highly respected friend, who readily favoured me with his presence, accompanied by my son. When that gentleman had satisfied himself of the facts of the case, he agreed in opinion with me, upon the impropriety of attempting to deliver by turning; we therefore determined upon perforating the chest; eviscerating the thoracic and abdominal cavities; and afterwards taking the chance of consequences. Accordingly about seven in the morning, with a large-sized perforator directed on my left hand, I made a free opening into the chest of sufficient capacity to admit the ready introduction of the hand, and proceeded to break down and extract the contents of the thorax. Having withdrawn such of these as I was able to get away, I passed the perforator through the diaphragm, and proceeded in a similar manner to abstract the abdominal contents. This part of the operation was attended with considerable embarrassment and difficulty; partly produced by the tenacity of the different viscera, and partly by the contraction of the original aperture. After being thus occupied for a length of time, I became fatigued, and requested my friend to relieve me. In his endeavours to withdraw the abdominal contents, he met with some part which gave unusual resistence. In his attempts to overcome it, he so far altered the position of the child, that the

other arm came down into the vagina. Having now possession of both arms, by which the position of the diminished trunk could be somewhat regulated, I was enabled to surround the neck with my finger, over which I carried a common blunt hook, and by its side I passed my decapitator, which was easily brought through the neck. The headless trunk was now brought down by the arms, and the rest of the child followed. The head was withdrawn by the assistance of a blunt hook inserted into the mouth; after which the placenta was found to be naturally separated." 78.

This woman had four children after this very severe delivery; in the last, the shoulder presented, with the arm down in the vagina; the membranes had already given way, but by immediately turning, a living child was brought into the world. It is only when the shoulder and chest are found wedged in the brim of the pelvis, and the child closely embraced by the contracted uterus, that, after attempting to introduce the hand for the purpose of turning the child, but finding the attempt fruitless, that we should proceed either to decapitation, or to the perforation of the thorax and abdomen. In selecting the one or other of these proceedings, we must be guided by the position of the fœtus; whichever may be most easily effected, ought to be preferred. In either case, it is of great importance to encourage uterine action at the time when we are withdrawing the child. Many cases are reported in Dr. Ramsbotham's book, in which much time has been unnecessarily lost, and much pain inflicted by repeated attempts to turn, although the hand could not be passed between the shoulders and the uterine parietes; the strength of the patient may thus become exhausted, and life be lost if further delay is permitted. Let us select an example of the dangers of the ancient practice.

"*A Shoulder Presentation under a deformed Pelvis, in the Management of which the Head was separated from the Trunk.*

About noon, on the 1st of May, 1796, I was sent for to a young woman, who had been in labour of her first child more than twenty-four hours, under the care of a midwife. On making an examination, I felt an arm down in the vagina, with the shoulder at the brim of the pelvis; on a closer enquiry, I detected a very deformed pelvis; I likewise found, that the uterus was firmly contracted on the body of the child. Not liking to interfere in a case in which such difficulties presented themselves, without the presence of another practitioner, I called to my assistance a medical friend. Upon his arrival, he commenced an attempt to turn the child; after great exertions and the lapse of more than half an hour, he so far succeeded as to bring down a leg. By the assistance of its purchase, he was enabled, after some further time, to bring down the trunk, and afterwards to release the arms. An attempt was now made to extract the head; but in the application of the force requisite to effect that object, the head was separated from the trunk, and left within the uterus. It now became necessary to lessen the head by perforation, after which it was with difficulty extracted. This unpleasant operation, from its commencement to its conclusion, continued more than four hours; so that the woman appeared afterwards much exhausted, and gave little hope of recovery.

The next day, however, she had considerably rallied, and continued to improve for a few days. But it was now found that the vagina was in a state of sloughing. Under an improved regimen and the use of tonics, the slough in due time separated, and the woman ultimately recovered." 92.

We have already alluded to the practice of dismembering the projecting extremities; the following is an example in which success attended.

"This lady began to shew symptoms of commencing labour in the afternoon of Tuesday, and in the evening sent for him to her assistance. After he had been some time in the house, he made an examination, and found a hand down in the vagina, with the shoulder at the brim of the pelvis. He attempted to introduce his hand for the purpose of turning the child, but was foiled in that attempt. A neighbouring friend was summoned to his assistance, who also endeavoured to turn the child, but he was equally unsuccessful. The husband was then dispatched to my house at the hour above-mentioned; but in consequence of my absence from home, reference was made to another accoucheur. This gentleman also made an attempt to turn the child, which proved as futile as those of his predecessors. After consulting upon the state of the patient, it was at length agreed, to separate the protruded arm at the shoulder; and this suggestion was with considerable difficulty carried into effect. Soon afterwards the other arm made its appearance in the vagina, and was also removed. The principal agent in the operation, even after this mutilation, was still unable to accomplish his intended object of turning; he found it yet impossible to push up the protruded chest, and to pass his hand sufficiently high to reach the feet. About six in the morning, a full dose of an opiate was exhibited; and, after waiting its effects a few hours, a most unaccountable change was found to have taken place in the position of the child; for the head was then presenting at the brim of the pelvis. The head was lessened, and the child was extracted in the usual manner. After the delivery of the child, this lady seemed to require the exhibition of some stimulant. Upon her head being raised from the pillow for the purpose of giving her some brandy and water, she was seized with a convulsion fit, which suddenly carried her off." 98.

An interesting case is detailed, in which the woman had been in labour, under a shoulder-presentation, for 36 hours; and various unsuccessful attempts at delivery had been made by her medical attendant before Dr. Ramsbotham was summoned. He readily and easily turned the child, but the patient died on the second day; and dissection revealed a laceration of the structure of the uterus, just above the pubes. Whether this accident had been produced by the efforts previously made, or took place during the delivery, was not very obvious; the Doctor states that he was unconscious of much resistance to the passage of his hand. It is dangerous to persist too obstinately in endeavouring to turn, when the child is firmly impacted, as either the womb may probably be lacerated, or irreparable mischief inflicted on the soft parts. In cases of strong tonic contractions of the uterus, the child must almost necessarily be born dead; and hence the propriety of not delaying delivery by perforation too long.

One case more on the subject of shoulder-presentations, and we must proceed to other topics. It is one of spontaneous evolution, or natural turning. The detail is given in the words of the midwife who attended.

"I was called to Mrs. S. at four in the afternoon, and found her flooding; I gave her the acid drops, which had the desired effect. At eight in the evening labour came on, but the os uteri was high and rigid. The membranes formed largely, and I could have no idea what the presentation was; I, therefore, deemed it most prudent to let them rupture of their own accord; and to my consternation, the right arm presented. I wrote for the doctor; the pains became so strong, that the hand was soon through the externals. I entreated the woman not to bear her pains down, and I endeavoured to keep the arm back, but in vain. The shoulder passed the pubes to the externals; and the perinæum began to be protruded so very largely, that I was obliged to direct my attention to it. The side began to advance with the hip, the breech, and the legs, and lastly, the head. The child was still-born; the mother is doing well." 105.

Having now discussed the very important subject of præternatural labours, our attention is next drawn to one full of momentous interest, from its frequency and great danger.

There is no situation in which a medical man can be placed, more awfully responsible, than when summoned to attend a case of uterine hæmorrhage. The lives of two beings depend so often on his individual skill, that it argues not only the most disgraceful ignorance, but, at the same time, the most criminal apathy, if he neglects to make himself thoroughly acquainted with the treatment of a case which is so thoroughly important; what, then, shall we say of the judgment and good feeling of those who have dared to disparage the practice of midwifery, and have impudently denounced it as unworthy a professional man? In addition to its urgent practical moment, many are the opportunities which the accoucheur has of studying some of the most curious and interesting phenomena of life, in health and in disease. For example, where shall we see a more beautifully-devised adaptation of structure to function than in the anatomy of the uterus, and the curious provisions which are made for the arresting of hæmorrhage from its blood-vessels. We hope very soon to allude to this subject more particularly, in our notice of Dr. Robert Lee's essay on the Placenta, in which he has published the dissections by that very able anatomist, Mr. Owen, of the College of Surgeons; suffice it to say, at present, that it is only by the contraction of the fibres of the womb, that all hæmorrhages from its cavity can be effectually restrained; and that, therefore, the great aim and object of a medical man must be to induce this state. Coagula may plug the open vessels for a time; but, if we should ever trust to this uncertain protection, the life of our patient is held by a frailer tenure than was the sword suspended over the head of Damocles. As a general fact, we may affirm that, during the whole term of utero-gestation, any considerable discharge of blood from the vagina can only arise from the detachment of a portion of the placenta from its adhesion to the uterine surface. Occasionally, though rarely, when the accident occurs in the early months of pregnancy, the blood is retained in part within the womb, and has been voided, one or more months after, as a firm flattened substance, somewhat like a piece of half-tanned sole-leather. The farther that the pregnancy is advanced, the more alarming, cæteris paribus, will probably be the hæmorrhage, for the vessels become proportionally more and more capacious as the size of the uterus increases. In treating of this subject, we shall consider, first, those cases in which the bleeding proceeds from the detachment of the placenta, while this vascular mass is affixed to the fundus, or to the walls of the uterus; and, secondly, those in which it is situated partially or entirely over the mouth of this organ; to the former, Dr. Rigby, in his excellent essay, applied the epithet "accidental"—to the latter, "unavoidable." Now it is only by vaginal examination that we can obtain a correct knowledge of the fact; if the finger detects the membranous bag, with the presenting part within it, the case is at once determined to be one of "*accidental*" hæmorrhage; but if it encounters a fibrous flesh-like mass, adherent round the inner edge of the os uteri; and especially if, when the finger is pushed upward with a slight force, the bleeding is temporarily increased, the more serious accident is to be apprehended. A large coagulum, indeed, formed within, or at the os uteri, may possibly be mistaken for the placenta; but its surface will be found to be smooth and even to the touch, to possess a less degree of resistance than the placenta, and to be more easily penetrated by the finger, or it may be made altogether to recede. The treatment of accidental flooding consists in recommending perfect quietude in the recumbent posture; the use of cold drinks, ices, acids, and opiates; the application of cold to the abdomen; and sometimes the employment of the plug. Should these means fail, Dr. Ramsbotham very judiciously urges the propriety of rupturing the membranes, and discharging the liquor amnii, whereby the womb is generally induced to contract, and thus to arrest the hæmorrhage. Extreme cases sometimes occur, when we are obliged to empty the uterus of its contents by turning: fortunately, the necessity for this step is rare; but if the loss of blood continues, after the escape of the waters, so as to endanger the mother's life, we have no alternative.

In performing this operation, the accoucheur will do well to attend to the following admirable precepts.

> "Artificial delivery, especially when it is to be effected by the introduction of the hand, and by turning the child, can never be successfully attempted under a state of positive syncope, or of very great exhaustion. Under either of these states, the powers of the constitution seem unable to bear up against the shock occasioned by the additional pain and violence inflicted thereby. It is, therefore, highly desirable that a truce from the discharge should be previously obtained, if possible, by some means or other, and under such circumstances, the *plug* may sometimes be advantageously applied. The equilibrium of the circulation is in some degree restored by a little delay, and the functions of the arterial system are resumed. When such advantages are gained, delivery may be effected with less danger. Let it be remembered, however, that the object of a forced delivery is not the mere extraction of the child; the evacuation of the uterine contents; but that such extraction and evacuation may become the means of inducing uterine contraction, and through it, the cessation of the hæmorrhage by the constriction of the bleeding vessels. The extraction of the child should therefore be made in a slow and gradual manner, and due attention should at the same time be paid to the degree of contractile effort in the uterine parietes. If it be made too quickly, the uterus is so suddenly emptied, that the diminution of its size cannot keep pace with the rapidity with which the child is withdrawn; its parietes are therefore left under a state of irregular contraction or of flaccidity. Indeed, there are few situations, in which a parturient woman can be placed, more replete with danger, than that in which the uterine parietes, either in the act of turning, or after the birth of the child, are felt lax, unresisting, and wrapping around the hand like a piece of wet wash-leather. Instrumental delivery ought to be conducted in the same deliberate and cautious manner, with a similar reference to the above principle." 139.

In almost all cases, in which the child is delivered by manual interference, it is better to remove the placenta rather early after the birth, than to defer that duty for a length of time. It is well known that many have lauded very highly the efficacy of the secale cornutum in uterine hæmorrhage. Dr. R. has not employed it extensively enough, to warrant him in giving a decided opinion. In one case, he states, its effects in increasing uterine action appeared evident and satisfactory. In the narration of cases to illustrate the above remarks, we shall select only such as present some interesting peculiarities.

"CASE CXXXI. *Expulsion of the Placenta before the Child.*"

"I found a woman between thirty and forty years of age, pregnant of her eleventh child, suffering under the usual symptoms of a sudden and violent loss of blood. The left arm was down in the vagina; the shoulder was pushed into the brim of the pelvis; and the pains were active. With some difficulty, I introduced my hand, got hold of the feet, and brought down the breech; but in turning the child, to my surprise and alarm, the placenta escaped externally before the breech was brought down. This circumstance induced me to hasten the extraction of the trunk, shoulders, and head; and fortunately my efforts were materially assisted by uterine contraction, which continued strong and effective. During this operation, there was no material increase of hæmorrhage. After the delivery of the child, the uterus felt firmly contracted, but the woman was under a state of great exhaustion; from which she was endeavoured to be roused by the free use of stimulants. But every means devised for her relief proved of no avail. In a few hours she became excessively restless, with difficult respiration, and did not survive the middle of the day.

In this instance, the placenta was largely separated from the uterus at the commencement of the flooding; so much so as very much to incommode the action of my hand in search of the feet; it seems to have been afterwards entirely detached by the act of turning. One essential point in the case deserving attention is, that after the escape of the placenta, there was no increase of hæmorrhage." 160.

After a sudden and profuse hæmorrhage from the uterus, a serous coloured discharge frequently occurs; and has been mistaken for the liquor amnii. The practitioner ought to be aware of this, and by careful examination he may always ascertain whether the bag of membranes is broken, or not. And here we again entreat our professional brethren to study most attentively every topic which has any reference to the treatment of flooding; their own peace of mind, and the happiness of the dearest relationships, are interested in their skill.

When the placenta is implanted over the os uteri, we have already explained that hæmorrhage is unavoidable: in such cases, the accident is rarely met with before the 6th month; it usually occurs between the 7th and 8th months, and is sometimes deferred to the middle, or even to the very end of the 9th month. The necessity of a speedy and correct examination is of the most urgent importance; for when the nature of the case is well ascertained, there is only one course which can be followed; viz. that of resolutely but cautiously turning the child, and withdrawing it. The chief point of consideration is to determine the exact time at which the operation ought to be done. As a general rule, the os uteri should be already well dilated, or at least so far relaxed, as to permit the introduction of the hand without much difficulty, before the delivery is attempted. No attempt should be made, forcibly to dilate it, by passing two or more fingers within its orifice, unless we intend immediately to introduce the whole hand. The directions given by the author are so judicious that we shall lay them unabridged before the reader.

"But in awaiting those changes which may ensure the performance of that operative act with the greatest ease and safety, the quantity of the discharge, and the mode in which it flows, should be carefully watched, as well as the symptoms which from hour to hour are induced upon the system. Let us beware, however, of protracting the delivery beyond that period, at which its intended object, the preservation of the patient, may be defeated. When the continuance of discharge has produced faintness, pallor of countenance, coldness of the extremities, and symptoms of that description, every minute's delay increases the degree of hazard to the woman's life. Upon the whole, it is better to have recourse to delivery an hour too soon, than an hour too late." 179.

In describing the steps of turning in such a case, Dr. Ramsbotham says, that at the moment of dilating and passing the os uteri, the hæmorrhage is tremendously increased, and if, at this moment, from alarm, or other cause, the operator should be induced to withdraw his hand, the consequences will be frightful.

The remark, although generally, is not uniformly correct. A case very lately occurred in our own practice, in which, when summoned, we found that already between seven and eight pounds of blood had been lost, and that it still flowed; but from the moment of introducing the hand, and beginning to dilate the os uteri, scarcely a spoonful of blood escaped. We have heard a similar observation made by that very experienced accoucheur, Dr. David Davis. Should the patient be in a state of great collapse and exhaustion, when we are summoned to her relief, our first object should be to try to revive her strength by appropriate cordials and stimulants, before we proceed to deliver by turning. Dr. Ramsbotham proposes, in some cases, to perforate the bag of membranes by a trocar pushed through the substance of the placenta, in order that contraction of the uterus may be temporarily induced. We shall permit the author to speak for himself.

"When I have been obliged to have recourse to a forced delivery by turning, under a state of great exhaustion, I have frequently fancied, that the shock inflicted upon the nervous system by the violence of the operation has greatly increased the danger of the woman, and has sometimes induced a fatal result. In reflecting upon this presumption, in case of sudden depression under a placental presentation, it has seemed to me desirable, if possible, to obtain a truce from the flooding before delivery is attempted, that the system may somewhat rally from its preceding effects. I have therefore thought, that if, in these desperate cases, by any gentle means, the liquor amnii could be discharged, without inducing a greater degree of placental separation, some advantage would be derived from uterine contraction, and the violence of the discharge would be thereby checked. I must however in candour declare, that I have not had an opportunity of realizing the practical effect of this suggestion, since it occurred to my mind; I offer it therefore merely as an object of future consideration. The method I propose is, to penetrate the centre of the placenta by a perforator, or other sharply-pointed instrument, and allow the liquor amnii to run off. If the discharge be thereby checked, delivery may be put off for a short time; but if the discharge should continue afterwards, delivery must not be delayed. Let it be clearly understood, however, that this act will not supersede the necessity of delivery sooner or later, and that it will cause some loss of the child's blood from the placental vessels.

• I have repeatedly remarked, that among those cases which have terminated fatally, in several of them that event has seemed to me to be hastened by too quick an extraction of the child, and the too sudden evacuation of the uterus. If the hand in turning be allowed to enter the uterus without resistance, and if, after it is in complete possession of the cavity, no contractile effort be perceptible in the parietes, the extraction of the child should be gradually performed." 189.

In some very rare cases the placenta has been completely detached from the os uteri, and been expelled either into the vagina, or even through the external parts, and the dead child has afterwards followed, without any return of flooding, or further hazard to the mother. Dr. Ramsbotham alludes to six such cases, which have come to his knowledge; and in every one of them, the mother recovered; hence we may infer, "that less danger attends an entire, but natural detachment of the placenta, in these cases, than is consequent upon a partial separation of that mass; and that the expulsion of the child may afterwards be safely entrusted to the natural powers without further interference." We shall extract one example of this rare occurrence.

"About half after six in the morning of April 29th 1818, a messenger arrived at my house, sent by two medical gentlemen in attendance upon a lady at Upper Clapton, with a note to this purport. 'We are in attendance upon Mrs. H. whose situation is involved in great uncertainty from a placental presentation; the bleeding is going on pretty actively, and we wish for your immediate opinion.' On my arrival at the house of the lady, about eight, I was told by one of the gentlemen, 'that since the note was sent off, some strong expulsive pains had come on, which had expelled the placenta through the external parts before the head of the child, and that it was lying upon the bed. That before this occurrence, the hæmorrhage had been violent, yet not to that extent as apparently to endanger the woman's life; but that since the appearance of the placenta, the flooding had very much abated.' During our conversation on this unusual occurrence, the gentleman more immediately in attendance, who, at my arrival was in the bed-room of his patient, came down stairs, and reported, 'that the head was presenting at the brim of the pelvis, with a hand down by its side; that there was no want of uterine action; that the flooding had ceased; and that his patient did not seem much exhausted.' An appeal was now made to my opinion, as to the further management of the case; to which I replied, 'that as the flooding (the most dangerous symptom) had abated; as the labour-pains continued active; and especially as the woman's strength kept up, there did not appear to me an immediate necessity for a recourse to any means for hastening delivery; watch your patient for a short time, and wait the result; if the flooding should return, or if any dangerous symptom make its appearance, let us know.' In about half an hour after this interview, the gentleman returned with a cheerful countenance, and stated, that the child was expelled without further loss of blood, and that his patient was promising to do extremely well." 230.

As it is of the utmost consequence that the management of placental presentations be thoroughly understood, we shall no doubt please many of our readers by transcribing an illustrative case.

"I was requested to visit a lady of middle age, the mother of several children, at a short distance from London, under uterine hæmorrhage, in the last month of pregnancy. She had previously suffered under several similar attacks without pain or other inconvenience; which had generally come on suddenly, and after a short continuance had gradually ceased. A repetition of the flooding had occurred the preceding evening in an increased degree, which had induced her medical attendant to sleep in the house; yet during the night, there had been a mere weeping from the vagina, scarcely coloured. At the time of my visit, this lady was sitting up; she had a cheerful countenance, a firm good pulse, and seemed in tolerable spirits. Indeed her appearance could not have excited the least alarm in the most timorous mind, if the previous and repeated attacks of discharge had not induced a suspicion, that the placenta might possibly be placed over, or near the os uteri. There was at this time very little discharge, and no pain. After being in the house an hour or two, I was permitted to make a vaginal enquiry, but the result was not very satisfactory. For the os uteri was rigid, and but slightly opened; and at the extremity of my finger, I thought that

I could detect the placenta. Throughout the day, the discharge was trifling; in the evening the lady was in good spirits; little alteration had taken place in the state of parts; and I was requested to sleep in the house. Between one and two on the Monday morning, I was disturbed by the nurse, who came to tell me, that the flooding had returned very violently, and that her mistress had slight pains; I now found the os uteri somewhat more relaxed with a great increase of discharge; and in a very short time, faintness came on, with less firmness of pulse. Under this state delivery was proposed, to which the lady readily assented. In passing my hand through the os uteri, I necessarily separated a larger portion of the placenta, and now the flooding became excessive, so that syncope ensued. Upon entering the uterus, I had some difficulty in rupturing the membranes; the bag was so flaccid as to offer little resistance, and the uterus was very inactive. Seizing a foot as quickly as I could, I brought down the breech; but the separated portion of the placenta escaped down before it. Recourse was now had to the exhibition of brandy pretty freely. Placing my right hand upon the uterine tumour, I assisted the trifling degree of contractile effort, which it exhibited, by external pressure, while, with the left, I made a slow extraction of the child by the feet. Upon the passage of the head, a large quantity of liquor amnii mixed with blood instantly escaped. The placenta was now thrown down into the vagina. As the uterus remained large, and very imperfectly contracted, with a continuance of flooding, I passed my hand without loss of time within its cavity, the stimulus of which induced some contraction. Our patient was now in a state of syncope, from which she was somewhat recovered for a short time by another recourse to brandy, so that I had hopes that she would have rallied. In about an hour, however, she became extremely restless, and the powers of life continuing to decline, she expired within two hours after delivery. The child was still-born." 204.

The third section of the present volume is devoted to the illustration of puerperal convulsions, one of the most frightful accidents which occur in medical practice. The tossing of the limbs, distortion of the face, the starting, staring eyes, the clenched teeth, the agitated breathing, and violent throbbing of the heart, are the leading symptoms; the duration of the fit is not long; an interval of quiet follows, to be quickly succeeded by other paroxysms of spasm, and other intervals of repose, until either relief is procured by means of art, or the powers of the system are exhausted by the numerous repetitions. While the fit lasts, the patient is quite insensible. A considerable resemblance exists between an attack of epilepsy, and of parturient convulsions; but they are generically distinguished by the extreme rapidity of the course of the latter; and by the absence of all aura epileptica. The predisponent causes are singularly obscure. Dr. Ramsbotham has frequently remarked, that, as with other diseases, several cases have occurred soon after each other. Dissection has hitherto thrown very uncertain light on the pathology; little or no change in the cerebral structure being generally found. In some cases, the vessels of the meninges are surcharged with blood, while those of the substance of the brain have appeared almost exsanguined; in others, a breach of vascular structure within the head has been detailed; and effused blood has been discovered in the ventricles, partly in a fluid, partly in a coagulated state. Puerperal convulsions may come on either before, during, or after parturition; they threaten great danger both to mother and child; and if unrelieved by art, almost uniformly have a fatal result. The attack is sometimes most sudden and instantaneous; at other times, it is preceded by symptoms indicative of cerebral plethora; pains in the head, confusion of ideas, stupor, giddiness, and so forth. The treatment consists in early, copious, and repeated depletions; to fix any specific quantity of blood to be withdrawn at one operation is ridiculous; we must be regulated by the effects produced; in most cases from 20 to 40 ounces will be found necessary. When the attack takes place in the 7th or 8th months, and is checked by the remedies employed, the woman rarely completes her full period of gestation; and labour comes on within a few days, or even in 24 hours. In the event of the disease not yielding, the only chance of saving the mother's and infant's lives, is in immediate delivery: but, as we have stated above, convulsions occasionally succeed the entire completion of labour; and from Dr. Ramsbotham's practice, it appears, that such cases are more intractable, and prove more frequently fatal, than when they occur previous to, or during labour. If they have commenced under these circumstances, and continued after delivery, the danger is much enhanced; but if, as often happens, they are checked, whenever the child is born, they seldom return; a quiet sleep succeeds, and the patient awakes refreshed and comfortable. As corroborative of these remarks, we present to our notice, a few of the very interesting examples which Dr. Ramsbotham has recorded.

"At four a. m. Friday, May 30th, 1817, a gentleman arrived at my house from a neighbouring village, to beg my immediate attendance upon the wife of a major in the army, in labour of her first child, and in a state of great danger. I was introduced to a young lady of a sprightly disposition, who had been attacked about an hour before my arrival with a convulsion-fit, during a common lingering labour, under the care of a respectable surgeon. Her labour had commenced on the evening of Wednesday; her attendant was then called, who remained in the house all night. It proceeded regularly, but slowly, throughout the day of Thursday; towards evening, the membranes broke: the pains afterwards became stronger and more frequent; but under great rigidity of all the soft parts. At this time, and for some hours thenceforward, the general appearances promised a happy termination. But this favourable prospect was, by and bye, overshadowed by the unexpected intervention of a convulsive paroxysm between three and four in the morning. The lady had hitherto been in excellent spirits, laughing and joking with her friends; when, just before the attack, she quaintly exclaimed, 'bless me, the room is studded with diamonds,' and instantly, her whole frame became violently convulsed. As soon as the necessary means could be procured, her attendant took away a quantity of blood from the arm, and sent to request my presence. I found this lady collected, and capable of answering my questions rationally; she complained of some unpleasant feelings in the head, yet not amounting to absolute pain; her pulse had undergone little alteration; the os uteri was opened to the size of a crown-piece, but was rigid and thick, with the head just entering the pelvis, pressing upon it; and the pains were returning at short intervals. I had not been long in the house, before another attack recurred, upon which I recommended the abstraction of more blood.

About seven, a. m. my friend and colleague, the late Dr. John Sims (who had been also summoned through the anxiety of the husband), arrived. After hearing the history of the case, and seeing the lady, he joined in opinion with me of the propriety of the loss of more blood. Not long after this third bleeding, we had the recurrence of another fit. While Dr. Sims was sitting by the side of the bed a little after nine, anxiously watching the lady, he witnessed the access and progress of another paroxysm, equally violent with any of the preceding ones. It was now evident, that the loss of blood, although upon the whole considerable, had neither prevented a return of the paroxysms, or diminished their violence; and that it could not be farther extended with safety; we therefore determined, that immediate delivery should be effected. About half-after nine, with the sanction of Dr. Sims, I perforated the head, and fixing the crotchet, began to make extraction; but the return of a paroxysm soon obliged me to desist during its continuance. After its cessation, my efforts were resumed to the release of the head. The uterus now contracted satisfactorily, and expelled the rest of the child with the placenta. The lady was afterwards lying in a senseless state; but after a short time, she appeared to be asleep; and remained quiet, and composed to the time of our departure at twelve o'clock. She had no return of convulsions after her delivery, but in due time recovered her health; and has borne several children since the preceding occurrence, without any tendency to a similar attack." 307.

The following is a case, which proved fatal, and in which the morbid appearances on dissection are detailed.

"At six, a. m. Saturday, January 26th, 1822, I was called to a poor woman in Fashion Street, Spitalfields, who had been attacked with convulsions. Her midwife had been summoned about two in the morning for some reason or other; but finding, to use her own expression, 'that there was no labour,' she did not remain with her patient. Some time after her departure, a convulsion-fit took place; the midwife was recalled; but before her return, five or six paroxysms had recurred; she then begged my assistance. I found the paroxysms violent, with short intervals, and a state of complete insensibility during those intervals. The os uteri was but little dilated, yet the liquor amnii was discharged, and the head was above the brim of the pelvis. I had a vein opened in each arm in my presence, and a large basin full of blood (I should think nearly two pounds) taken away from each orifice. Yet this free and liberal bleeding had no beneficial effect, either upon the violence, or the frequency of the paroxysms. After witnessing the recurrence of several more fits without any palliation, I determined upon immediate delivery by turning the child; but I had no trifling difficulties to overcome in attaining that object. During the act of delivery, and for a short time afterwards, the woman remained free from any return; she appeared relieved, and gave some hopes of recovery; but within an hour, another fit made its appearance, which she did not long survive.

The body was inspected the following day. After a most careful examination of the head, no positive breach of vessel could be detected. The blood-vessels of the pia-mater were beautifully injected with blood; and a section of the substance of the brain shewed more bloody points than usual; there was also a quantity of tinged serum in the ventricles. The vessels of the cerebellum were likewise unusually distended with blood. The viscera of the abdomen were generally healthy. The blood-vessels of the broad ligaments were empty, and seemed puffy and large. The uterine structure was flaccid; uncontracted; with a suffused redness at its back part; its internal surface had a natural appearance." 296.

In case CLXXXI the convulsions were accompanied with hæmatemesis, and proved very rapidly fatal. No time must be lost in the treatment of this formidable malady.

"On the 11th of March, 1796, a stout healthy young woman was delivered of her first child about six in the evening, having suffered comparatively little under a natural and easy labour, during which she made no particular complaint. I left the house after its completion, in the full expectation that she would do well. But about two hours after my departure, I was recalled in a hurry. I was then told that soon after I was gone, the woman was suddenly siezed with pain at the stomach, which was followed by vomiting and convulsions, and that after two or three paroxysms, she threw up a considerable quantity of blood. From the first appearance of the convulsions she became totally insensible and comatose, and continued in that state to the time of her death, which took place within fifteen hours after her delivery. Her situation precluded all aid from the exhibition of internal medicine, for none could be got into the stomach; the injection of clysters was recommended, but the unmanageableness of the patient rendered assistance from this source also nugatory. The ejection of blood from the stomach deterred me from the use of the lancet; indeed, I candidly confess, that at that early period of my professional career, I had not witnessed the beneficial effects of large bleeding; the practice of which was then scarcely established." 315.

Dr. Ramsbotham has observed that most of the cases of puerperal convulsions which he has seen, have occurred in hot sultry weather, especially when there was much electricity in the atmosphere. In one very alarming example, to which he was summoned during the raging of a violent thunderstorm, the lady had been very safely confined of her second child, for twelve hours, before any appearance of the fits, which so quickly succeeded each other, as scarcely to leave any interval. During the intermissions she lay in a state of total insensibility; and foamed at the mouth; the pupils were strongly contracted, and the pulse small, quick and confined. By large depletions of blood, her life was saved; and when she recovered, she had no recollection of the occurrence during her labour, although she appeared to be in perfect health at the time of delivery.

Does not this fact shew, says Dr. R., that there was even then a tendency to cerebral indisposition, which had escaped notice, and which was probably increased by the state of the atmosphere, and by the act of parturition? Before we quit the subject of convulsions, we must allude to a great omission in the remedies recommended by our author. There is one whose application is so easy, and whose energy is so potent, that we are inclined to rate its value as highly as we do that of blood-letting. In our practice its successful effects have been most satisfactorily established; and it is therefore with much confidence that we recommend it to the notice of Dr. Ramsbotham, and of our readers. The remedy to which we allude, is, the affusion of cold water on the vertex, so managed, that a minute stream is made to play uninterruptedly from a considerable height. By this simple but efficacious expedient, most cases of parturient, and infantile convulsions may be cured, provided resort is had to it at the commencement of the disease, before any serious vascular derangement occurs, or the system is so weakened by the severity of the paroxysms as to be unable to recover itself.

Upon the fourth section, which treats of labour with two or more children, we cannot afford much space to comment.

The proportion of twins appears to be about one case in 90 or 100 labours. When there is more than one fœtus in the womb, the woman has a less chance of completing the full period of gestation, than in a single conception: hence, miscarriages of twins is very common. In some cases, one of the ova loses its vitality, and is either retained in utero, or is aborted, while the other remains behind, and becomes fully formed.

As to the treatment of labours, in which there is more than one child, the following directions ought to be attended to. Immediately after the expulsion of the first, let the hand be placed on the belly of the mother, and if we have reason to suspect the presence of another, particular caution must be adopted, not to interfere with the protruded umbilical cord and placenta. Should uterine pains not come on in the course of an hour or two after the first birth, the second bag of membranes may be ruptured by the finger, or by a stilet; and if, notwithstanding the escape of the liquor amnii, the same tendency to inactivity should continue for some time longer, say two or three hours, we should then turn the child and extract it by the feet. Formerly these cases were left entirely to Nature's management, and were, in consequence, frequently attended with much protracted suffering, and sometimes followed by fatal issues. The following is a good example of such practice, in which the second child was left in utero for three days after the expulsion of the first.

"In the forenoon of Thursday, May 31st, 1821, my opinion was asked by a professional friend, upon the case of a woman, who had been delivered of a living child the day preceding at three, p.m. who had a second child in utero; and who, from the time of the expulsion of the first, had lost all further return of pain. I told him, that had I been attending the case, I would have delivered the second child before so much time had passed over; although it did not appear that the woman had hitherto suffered any inconvenience; but that under all the circumstances, I could not then advise immediate delivery. I recommended my friend to watch the case, and to await awhile longer the result. On the evening of Saturday, my assistance was requested; the woman still remaining undelivered of the second child. I then learnt, that on the morning of Friday, she had a violent shivering fit, which lasted a quarter of an hour; that no pains had returned from the expulsion of the first child till the middle of Saturday afternoon, when they became active; that the woman seemed nearly exhausted. The child's head was entering the pelvis, with the forehead to the pubes. It now seemed desirable, that this protracted labour should be speedily terminated; I therefore extracted the head by instrumental means, and the rest of the child was afterwards expelled by uterine action. After the delivery of the child, the woman began to flood very seriously; the uterus was at this time, to the external feel, flaccid and uncontracted. The hæmorrhage continuing, I presently found myself obliged to remove the double placenta by the introduction of the hand, a portion of which proved to be adherent. After delivery, there was little external discharge, but the woman complained of being very ill; indeed the uterus had again relaxed, and had become much more enlarged. On pressure, a quantity of fluid was thrown off, so that internal hæmorrhage was going on. I applied a strong degree of grasping pressure for some time, and left the woman in a hazardous state. She did not long survive my departure." 346.

In case CXCII, dangerous flooding had been occasioned by the medical attendant having attempted to withdraw the placenta of the first born, before he had ascertained the presence of a second child; and CXCIII, shews that fatal flooding may be induced by an unskilful extraction of the double placenta. At this part of his work, our author rather confusedly introduces some remarks on, and cases of dropsy of the membranes, and of ovarian dropsy; we shall first analyze the section on abortion, and class these other affections with the miscellaneous diseases which may all be sufficiently well grouped together. Miscarriages are more frequent in the females of the higher, than of the more humble classes of society, and take place more commonly before the period of quickening than after that occurrence: the period at which a pregnant woman is most disposed to this accident is between the 10th and 12th week of gestation. Dr. R. is inclined to attribute this to some imperfection in the change of fœtal circulation, which is usually about this time effected; for it is seldom that the placenta and funis can be detected before the end of the third month. The vulgar opinion that the fœtus does not possess vitality till the period of quickening, is absurdly enough recognised as true in criminal law; to the wilful destruction of the fruit of the womb after quickening, or in legal language, after the woman is quick with child, is awarded upon conviction, capital punishment; and to that destruction before this period, a less severe penalty. A medical man is often led to suspect the coming on of an abortion, by the absence, or disappearance of those feelings with which the early stages of pregnancy are commonly accompanied. The mammæ lose that increase of size and firmness, which they had lately acquired, and the morning sickness ceases. It often happens that when the lady has suddenly lost this troublesome companion, she is quite delighted, little aware that a most unfortunate change has taken place within her womb, of which there are at present no visible symptoms.

It is not unfrequent that the ovum dies, and yet is retained in the uterus for many weeks or even months, without exciting any general or local disturbance; the symptoms of pregnancy indeed cease, but the health may continue perfectly good. The younger the fœtus is at the time of its death, the sooner from that date will it be probably expelled; if it has reached the fifth or sixth month, it is often detained till the expiration of the usual term of gestation. The case may be suspected by the suspension of the common symptoms of progressive pregnancy. Occasionally, though it is comparatively a rare occurrence in a twin conception, one of the ova dies and is expelled, say about the third month, and the other one remains behind, and becomes a full grown child. Ladies are much puzzled and perplexed to account for this; the solution is obvious to a medical man. But the dead ovum is not always discharged; and at the end of the full period, the woman may be delivered of a perfect child, and of a dead ovum which had not passed the third month. A very singular fact observed in such cases, is, that this undeveloped fœtus sometimes exhibits no mark of putrefaction. The two placentæ are connected together, but one part of the mass is larger than the other. Contrasted with this curious phenomenon, it is not unfrequent, that if a single conception loses its vitality, and is afterwards detained in the uterus, even for a few days only, on expulsion it is found much decayed. In the treatment of miscarriages, it is to be kept in mind, that if a woman has repeatedly aborted at the same period of pregnancy, it is almost impossible to prevent the recurrence of a similar mishap; hence the especial necessity of unusual attention about the period at which it may be expected. Quietude of body and mind is indispensable, and all sexual intercourse must be avoided. After an abortion, it is not uncommon for a woman to complain of a feeling of bearing down; of a tendency to prolapsus uteri; this accident is more common after a premature, than after a regular labour; and arises from too soon quitting the recumbent posture. We subjoin one case.

"Several years ago, my attendance was requested upon Mrs. E. a young lady, who had been married some time, and who had had several miscarriages. During the course of the present pregnancy, upon which I was consulted, she had been repeatedly attacked with slight hæmorrhagic discharges, and pains threatening abortion, which had as repeatedly subsided. When she had attained the seventh month of pregnancy, however, she had uterine hæmorrhage succeeded by pains; these ultimately terminated, after a common labour, in the expulsion of a living child, but which did not long survive the birth. The uterus contracted well, and the placenta followed without trouble. When I called upon this lady twelve or fourteen hours after delivery, she seemed tolerably well, but she complained of pain, with a sense of pressure upon the external parts, as if something was about to pass through them. Not being satisfied with her account, I requested to make an examination, and immediately detected a substance of some kind in the vagina, pressing upon the perinæum, and external parts, of the size of an orange; behind which I could readily pass my finger. Introducing too fingers behind this mass, which readily gave way, I hooked out a perfect ovum; that is, 'an embryo within its membranes entire, at little more than the third month of gestation.' Upon opening the membranes, there was a male fœtus (the sex just discoverable), of about that age; perfect as far as it went, and without the least disposition to putrefaction.

The mystery respecting the repeated tendencies to abortion, was now satisfactorily cleared up. The lady had conceived of twins, and went on well to the third month, when one ovum lost its vitality. For the purpose of ridding itself of this dead animal substance, the uterus had instituted certain operations, which were counteracted by management." 402.

EXTRA-UTERINE PREGNANCY.

The female often does not suspect any imperfection or irregularity, till she has completed the full period; if she then experiences any pain, the doctor and nurse are summoned, in expectation of labour; but when the uterus is examined, it is found to be little developed; a solid, hard tumour is felt in the belly, more inclined to one side than to the other, and rather tender on pressure; the increase of size is not uniform over the whole abdomen, nor to the usual extent of common pregnancy; but the nature of the case is seldom clearly made out, till the process of the destruction of the fœtus commences, and a discharge of flesh, bones, &c. outwardly, takes place. In some rare instances the misplaced ovum has remained very stationary for a length of time, interfering little with the health, and producing no annoyance, except such as arises from pressure on the neighbouring parts. The woman has even become pregnant meanwhile in the regular way, and been delivered of a living child. The usual progress, however, of extra-uterine conceptions is the establisment of an adhesive inflammation between the cyst and the abdominal parietes, intestines, or body of the uterus; ulceration follows, and the fœtus is discharged piecemeal; the mother's health generally sinks under the protracted suffering. Should the contents suddenly escape into the cavity of the belly, death may very rapidly ensue. A curious variety of misplaced conception is when the ovum is arrested in that portion of the fallopian tube which perforates the uterine structure; for in this case, the whole of the uterus is temporarily developed, as under regular pregnancy; but that portion in which the fœtus is detained becomes more enlarged than the rest of the organ. The progress of the symptoms is nearly the same as in other examples of this singular aberration. Upon dissection the uterus presents a strange appearance; one part being little developed, with the os tincæ attached to it; the other portion extensively enlarged, with an obvious rupture connected with the abdominal cavity, but without any opening into the hollow of the womb. Many cases which have been supposed to be rupture of the uterus are of this kind. We shall analyse the six cases of extra-uterine pregnancy narrated by Dr. Ramsbotham, stating the most prominent features of each.

In case CCI. the woman observed that the enlargement of the belly was chiefly confined to the left side; she suffered much from sickness, pain in the left side, and most obstinate costiveness, which resisted ordinary purgatives; she felt the motion of the child; the mammæ were enlarged. The motions ceased in the sixth month; labour threatened to come on several times, and, after much anxiety and suffering, she passed per rectum the thigh-bone of a child, about 12 months from the commencement of her pregnancy. She died of protracted diarrhœa; the catamenia had returned. On dissection, a cyst was found full of bones and putrid matter, communicating with the arch of the colon.

In case CCII. the swelling was chiefly on the right side, and felt hard and circumscribed; bowels very much confined; catamenia suspended; mammæ at first full and painful, afterwards flaccid. Nearly two years after the commencement of pregnancy, an intractable diarrhœa supervened; and, after it had continued for four months, fœtal bones were discharged from the bowels; this woman recovered. The menstrual discharge was quite regular from the seventh or eighth month after conception, till within a month or two before the fragments of the child were first voided.

In case CCIII. the lady considered that she became pregnant at Christmas, 1818. The swelling of the belly was chiefly on the left side, which became hard and solid to the finger; she felt the motion of the child. The period of gestation having elapsed, it was believed that she had not been in the family-way at all. A large tumor was still perceptible on the left side, where it continued stationary; she occasionally felt severe pain in it; and the bowels were most obstinately confined. In August 1823, she was confined of a living child at the full time. In March, 1824, she passed by stool the thighbone of a fœtus; and soon afterwards many more bones were discharged. The issue of the case is not known.

In case CCIV. the patient conceived in December, 1827; quickened in May following; and the movements of the child were afterwards so violent occasionally, as to be seen through her dress. In August, she felt pains which she thought were labour-pains; at this period, she felt the motion of the child strong and lively; but soon afterwards it ceased entirely. A watery discharge at first, and then a fetid one began to issue from the vagina; and a bone was passed not long before Dr. R. was consulted, in the following November. At that time she was suffering from severe pains in the belly, and the bowels were very costive; there was a large, hard, circumscribed and tender tumour in the belly, inclining rather to the right side of it. In the beginning of 1829, a swelling formed at the umbilicus; it broke and emitted much offensive fluid, mixed with fæcal matters; in February, some of the phalanges of the fingers passed through the opening; similar discharges escaped by the rectum, and also by the vagina. She gradually sunk, and died in May. On examining the abdomen, the cyst was found to communicate not only with the abscess outwardly, but also with the intestinal canal and the uterus. The uterus, both ovaries, and fallopian tubes were entire and healthy. We may, therefore, suppose the above to have been a ventral pregnancy.

Case CCV. proved rapidly fatal. A young lady had symptoms of miscarriage three months after marriage; she complained also of a constant pain in the lower part of the belly, which was tender, but little swelled. While combing her hair and preparing for bed, after passing a better day than usual, she was suddenly seized with an alarming faintness and pain, and in a few hours expired, with all the symptoms of internal hæmorrhage. On dissection a quantity of fluid blood, mixed with coagula, was found in the abdomen; it had escaped from the right fallopian tube, which was formed into a cyst, containing an embryo ten or twelve weeks old. The uterus was of the ordinary size.

Case CCVI. is quite similar to the preceding one.

DROPSY OF THE MEMBRANES.

The cause which usually excites an encreased deposition of the liquor amnii is quite mysterious; the health is usually not interfered with thereby, except in consequence of the inconvenience produced by the size, weight, or pressure of the accumulated fluid. Nor does the uterine system appear to be much injured by it; for, after it has been discharged, the womb contracts, and speedily regains its accustomed functions. The quantity of liquor amnii amounts in some instances to several gallons, by which the uterine parietes are excessively extended and attenuated; indeed to such a degree occasionally, as to render fluctuation under the hand distinctly perceptible: hence the frequent mistakes of ascites, for this affection of the womb, or of its contents. A correct diagnosis is of the highest importance, and may generally be arrived at, if the following signs are attended to. In dropsy of the membranes, there are present at first the symptoms of pregnancy; the belly encreases rapidly and somewhat suddenly in size within a short time; and the patient seems otherwise in good health. The reverse of all this usually holds true in reference to ascites; and besides, this disease for the most part occurs at a period of life, when conception is out of the question. Let it however be remembered, that both forms of dropsy may exist contemporaneously—such a case requires great sagacity and most inquisitive attention to detect. As however there will be always more or less doubt, it ought to be a rule in practice, that the complete term of pregnancy be suffered to pass over, before any decisive means of relief be resorted to.

An example will best illustrate the importance of this observation.

> " A lady, thirty-six years of age, the mother of several children, after the common symptoms of incipient pregnancy, became, soon after the fourth month, unusually large for that period of gestation; at the same time complaining occasionally of a violent pain in the side of the abdomen, which would attack her suddenly, and as suddenly disappear. There were at this time a quick pulse, a dry tongue, with scantiness of urine, which was thick and turbid, and not more in quantity than half a pint in twenty-four hours. The swelling of the belly increased rapidly until fluctuation was perceptible; which at first was obscure, but afterwards was more evident. Her respiration became quick and laboured; general emaciation took place; she appeared in great distress, yet the legs were not œdematous. The general symptoms now so nearly resembled those of ascites, that it became doubtful whether she was pregnant or not. About the middle of

January, 1812, a physician was consulted, who pronounced the case to be ascites, and prescribed diuretics. Soon afterwards she was seen by another physician, who was disposed to think the case one of ovarian dropsy; he prescribed purgatives, and mercurial ointment with camphor to be rubbed upon the abdomen. She was, after no long lapse of time, seen by an eminent surgeon, who considered the case to be ascites, and proposed tapping. Under all the circumstances of the case, the operation was thought desirable; yet, as there had been some doubts about pregnancy; it was previously judged expedient to enquire into the state of the uterus. A vaginal examination was accordingly made; upon which the os uteri was found a little open, and through it, a tense bag of membranes was detected; all further proceedings were therefore for the present suspended. Shortly after this examination, when the lady had reached something more than the fifth month of pregnancy, her usual attendant was called, in consequence of her being attacked with pains, which she considered to be labour-pains; at this time she was of an immense size. The pains presently became of a more decided character; the os uteri was considerably dilated, with a tense bag of membranes protruding through it. He passed his finger through the bag, and a deluge of fluid immediately rushed out to the quantity of several gallons, flooding the room, and putting into requisition mops and cloths, to sop it up; upon this discharge the size of the belly disappeared, and the uterus began to contract more actively. Notwithstanding this sudden evacuation, the woman merely complained of faintness. The labour-pains went on gradually to the expulsion of a dead fœtus under a breech-presentation, apparently between the fifth and sixth month. The state of the uterine tumour induced a suspicion that there was a second child; this proved to be the fact. Uterine action was presently re-established, and another dead child was expelled. When the after-births were withdrawn, the uterus was found to be well contracted; the woman afterwards went on well, and recovered her former health under common management in the usual time." 351.

Case CXCVI. exemplifies well the co-existence of ascites and pregnancy.

"In the latter part of the year 1819, Mrs. W. in Cripplegate, became in a family way, and in the early part of her pregnancy had symptoms of ascites. This complaint induced a suspicion that she might be mistaken as to the state of pregnancy; she consulted an eminent accoucheur, who pronounced her to be pregnant. The process of gestation, and the dropsical symptoms, kept pace with each other to Sunday afternoon, August 6th, 1820, when she was delivered of a healthy living child, after an easy and quick labour, even before her accoucheur could arrive at the house. On the Wednesday following, I was desired to visit her: at this time, her abdomen was enormously swelled, with an evident fluctuation; her breathing was rapid and difficult; the pulse was small and quick; she complained of constant pain in the belly; and seemed to be in the greatest distress. These symptoms had been rapidly aggravated since her delivery, especially the abdominal extension. Seeing no chance of even temporary relief but in the evacuation of the fluid, I requested that a surgeon might be called in, who introduced a trocar, and drew off between four and five gallons of limpid serum. The next day she seemed to be considerably relieved; but in a few days it was too obvious, that the abdominal cavity was again rapidly filling; in this way she lingered on for a short time, and gradually sunk. The woman was in her forty-second year, and had borne sixteen living children." 354.

Dr. R. reports also a case in which pregnancy and ovarian dropsy existed at the same time; the possibility therefore of such an occurrence it is of much moment to recollect.

With respect to the origin, or mode of formation of what are termed "moles," or "false conceptions," our author is induced to believe that they frequently arise from a blighted ovum, which, though retaining its adhesion to the uterus, is in time converted into a solid inorganized mass, totally unlike any fœtal structure.

The reader should remember, that pregnancy is often very closely simulated by such growths; and also by the accumulation of hydatids within the womb. Although it is abundantly easy in general to ascertain the existence of pregnancy, yet cases happen to every medical man, which not a little puzzle and perplex both him and his patient. It is not an uncommon occurrence for women, who even have had children, to suppose themselves to be in the family way, when in fact they are not so. The catamenia indeed cease, and in time the abdomen enlarges; our patient attributes this to impregnation. She gives way in her dress; indulges any whim of appetite for articles of food and drink, and neglects her bowels; flatus is accumulated, and the rumbling is mistaken for the movement of a child; the distension increases; and perhaps some pains come on at the period of the expected accouchement; but upon a vaginal examination, the uterus is found to be unimpregnated. Now it is sometimes no easy task to ascertain the particular cause of the mistake; it may be from a diseased ovarium, or from a deposit of fat in the omentum, or under the abdominal muscles; or from a loaded and unhealthy state of the alimentary canal; or from a combination of all these occurrences. It is important to remark, that although the belly is large, yet the hand cannot detect any thing like a uterine tumor, except perhaps in ovarian enlargements; and if we examine per vaginam, we shall generally arrive at the truth. When the medical man is satisfied of the mistake of his patient, he will find that a few doses of calomel and purgatives, followed by tonics, the use of a bandage, and bathing, will speedily dissipate all the symptoms. To shew however the vexatious uncertainty of such cases, we shall give a condensed report of one, which is detailed by Dr. Ramsbotham.

In December, 1826, he visited a lady, mother of a large family, and supposed to be in the 6th month of pregnancy; there was an excessive enlargement of the uterine tumor, with a painful extension of the abdominal parietes, so that the belly was as prominent as at the full period; it was resisting on pressure, and did not convey any feeling of fluctuation: what was singular, it had chiefly taken place within the preceding *fortnight*;—a vaginal examination gave little satisfactory knowledge; the os uteri was slightly open, thin and relaxed, the cervix was extended and scarcely perceptible. Under the impression of pregnancy, the great distension could only be referred to dropsy of the liquor amnii; a temporising plan of treatment was recommended. This patient continued in a state of feverish disturbance for two months, when parturient pains commenced, the os uteri opened, the membranes protruded, but no part of the child could be felt. The bag burst, and a rush of liquor amnii instantly followed; soon after a child between the fifth and sixth month was expelled.

In December, 1827, Dr. R. was again consulted; the lady was supposed to be three months gone with child, yet the belly was as large as at the end of the 9th. The uterine tumor was distinctly felt, large, firm, and resistant, and very tender on pressure, especially at one point towards the right ileum, where the pain was exquisite. A constant discharge, sometimes sanguineous, at other times serous, with a few coagula, but inodorous, had escaped from the vagina for the preceding five weeks. The symptoms being altogether so similar to those which existed on the former occasion, were at once attributed to the same cause, especially as the catamenia had been regular for several months before the period at which she supposed that conception took place, and as afterwards a progressive, although a very unusual increase of size followed. The cervix uteri was elongated and thickened; the os tincæ was soft, flaccid, and a little open, so as to admit the passage of the finger about half an inch; yet nothing like the bag of membranes was perceptible; and the body of the viscus was obviously much enlarged. The treatment adopted was merely palliative. Four days after this date, Dr. R. again saw her; the abdominal distension was rapidly encreasing, and the general health so much disturbed, that considerable apprehensions of a fatal issue were entertained. Under the belief of pregnancy, a catheter was carried high up into the cavity of the womb, but no fluid escaped. Next day the patient was much distressed by pains every now and then returning; she appeared quite exhausted, and died before noon.

Sectio Cadaveris. The abdomen was tumid and soft, having lost much of its former firmness; when the parietes were divided, a quantity of an offensive gas escaped. The uterus was of the size which it has in the 6th month of pregnancy; flabby, and had

> "A red appearance on its external surface, yet not indicative of inflammatory action. The stomach and intestines were distended by gas; the other viscera had a healthy aspect. Upon removing the uterus out of the pelvis, the os uteri was open and flaccid, and within it was seen a tinge of dark redness, which was afterwards found to pervade the whole of its inner surface. Upon dividing the uterine structure, its parietes were thickened and enlarged, as under pregnancy, but no appearance of a fœtus could be detected. The cavity merely contained a fibrous mass, about the size of a large egg, loosely attached to the posterior surface, and entangling within its substance, a number of small coagula. This mass was surrounded by a quantity of bloody purulent fluid, in which were floating other small coagula. The whole of the internal surface of the viscus was in a state of disease, which on a close inspection put on the appearance of granulating eminences; in some points, especially near the cervix uteri, its structure was destroyed by the ulcerative process, almost to the peritoneal covering. The uterine cavity would have contained a body equal in size to the infantile head at full time. The ovaria, the fallopian tubes, and the vagina had a healthy appearance." 427.

Retroversio Uteri usually occurs a short time before quickening, when the dilated and dilating organ nearly fills up the cavity of the pelvis, and is about to emerge therefrom into that of the abdomen. It may generally be traced to arise from an over-distended bladder, aided probably by some momentary occurrence, giving to it increased effect. Hence in treating this malady, the chief indication is to evacuate the bladder, and to prevent it from becoming again distended. Should, however, the uterus not right itself in a few days, an artificial attempt to replace it must be made, by introducing two or more fingers of the left hand within the rectum, for the purpose of pushing up the fundus, while at the same time, with the other hand in the vagina we draw down the cervix. The patient, during the operation, ought to rest on her elbows and knees, her body forming an inclined plane. If repeated attempts to effect this prove fruitless, it may be deemed necessary to induce abortion, or at least to discharge the liquor amnii; and the less scruple may be felt in doing this, as we know that miscarriage, at all events, or premature labour, will sooner or later ensue. Considerable difficulty may be experienced in the operation, in consequence of the displacement of the parts; and Dr. R. tells us that, in the only instance in which he performed it, he succeeded by introducing an elastic bougie; on the second following day, the fœtus and placenta were expelled. Seven months after this period, the lady became again pregnant; and in the third month the uterus was retroverted a second time; but fortunately soon righted itself, when the bladder was emptied. She went on to her full time, and was delivered of a perfectly grown child.

It is possible that other diseases may be mistaken for retroverted uterus, even by accoucheurs of great tact and experience; and we therefore cannot do better than extract, from this most valuable repertory of cases, one which illustrates the truth of our remark; but are necessitated to abridge the details. In March, 1820, Dr. R. first visited the patient. She had been married several years, but had never been pregnant. The belly was enlarged, and the bowels obstinately confined, and the urine very scanty for the previous three weeks. Purgatives produced no effect; and the dysuria became more distressing, as the water kept constantly dribbling away. On introducing the catheter, an operation which had been very improperly neglected by her former medical attendants, a wash-hand basin full of urine was drawn off; the hand now introduced into the vagina found a large firm tumor entirely filling up the pelvis, and pressing upon the rectum; it could not be pushed aside by any pressure. The bladder was afterwards relieved daily by the catheter. Another distinguished accoucher now joined Dr. R. in consultation; both considered the case to be retroversio uteri; and it was agreed first to attempt to replace the organ, and should that fail, to rupture the membranes; but in neither operation did they succeed. A third physician was called in, and his opinion coincided with that of the others;—again the membranes were attempted to be ruptured, but the trial was ineffective. The belly was now much swelled; the bowels so costive as to resist all medicines, either by mouth or in injections; in a few days she died.

Dissection. On dividing the abdominal parietes a large cyst was discovered, partly covered by omentum, to which it adhered, and likewise to the peritoneum lining the muscles, and to the fundus of the bladder. It was vascular, and fluctuated when pressed upon. Upon puncturing it several quarts of serous fluid were discharged. The urinary bladder was empty, and apparently quite healthy in structure; the uterus was also healthy, unimpregnated, and found lying upon a smaller cyst, which was of such a size, as to fill up the whole cavity of the pelvis, and to contain probably two or three pints of fluid. These two cysts proved to be the left and right ovaria, the uterus being situated horizontally between the two, with its orifice above the pubis. The distension of the abdomen had been caused by the dropsical ovary of the left side; and the right one, by its firm adhesions within the pelvis, and the consequent pressure upon the bladder and rectum, had produced all the singular symptoms observed during life.

POLYPUS OF THE UTERUS.

Whenever a female, of mature years, has a much increased menstrual discharge, and suffers from occasional hæmorrhages, and a constant draining of a serous, mucous, or purulent discharge in the intervals; when she has pains in the back, with a sense of pressure, or dragging downwards, it is the duty of a medical man to suspect a polypus, and to examine the state of the uterus.

A tuberculated state of the internal surface of this organ will indeed give rise to most of the symptoms of polypus; these tubercles may sometimes be felt, by introducing the finger into the os uteri; they have not a narrow arch and base like polypi, but are of the same breadth throughout; and they very slowly increase in size. It is well known that similar growths are frequently found upon the external surface of the womb, and are denominated the fleshy, or white tubercles. Sometimes these tumors acquire the size of an orange, and induce much inconvenience or suffering, if situated between the uterus and rectum. In one case mentioned by Dr. R. all the symptoms of diseased rectum were present; and it was at length discovered that ulceration between the gut and tumor had taken place.

Polypus of the uterus occasionally, though rarely, is met with in unmarried females; as is exemplified in Case CCXIII.

The inverted uterus has been mistaken for polypus, and been attempted to be removed. Dr. R. candidly avows an error of this sort which he once committed. The day after delivery, a fleshy tumor, of the size of a large pear, was protruded suddenly through the external parts, and there it remained; the woman was in little pain; and to appearance was doing quite well. Some forcible efforts to pull the mass away, under the idea that it was a false conception, had been made by her medical attendant. It was now gently returned into the vagina, and perfect quietude enjoined. The tumor did not again descend; and she soon recovered, having during all the time suckled her child. Some months afterwards she again became pregnant, at which Dr. R. was much surprised, as he thought it improbable that she should conceive if the uterus was inverted; however, in due time she was confined. During the labour Dr. R. had felt a substance of a considerable size in the vagina, and above this the head of the child presenting; as the pains became strong, the tumor was first expelled and then the head. On minutely examining the protruded substance it was found attached to the fore part of the os uteri by a broad and vascular base. For the present, it was cautiously replaced, and the patient did well, and was able to nurse her child. It was observed that, as the uterus became contracted, the polypus decreased in size. It was afterwards removed by ligature.

Case CCXVI. is a good illustration of the perplexing embarrassments which sometimes await the obstetrical practitioner, in the diagnosis of tumors felt in the vagina. The lady had, for a long time, suffered from repeated hæmorrhages; her health was beginning to give way. On examination, a large firm and round mass, occupying nearly the entire cavity of the pelvis, was detected; the finger could not be carried well round it, nor reach the os uteri. Several other swellings could be felt by the hand in the hypogastrium, on the external surface of the uterus. A double ligature was applied on the supposed polypus; but very disagreeable symptoms appeared on the second day, and it was, therefore, removed; but the patient speedily became worse, and she died three weeks after the operation. A post-mortem inquiry was not allowed; and we are, therefore, left in utter doubt as to the true nature of the disease. In such a case, however, we should not follow the example of Dr. Ramsbotham, but be satisfied with mere palliative treatment, till the os uteri can be distinctly felt. It is better, moreover, that a patient should die of a disease, than of the means employed for its removal; and the fatal result was very evidently hurried in the example we have just quoted. By leeching, or even, perhaps, by an incision into the mass, its size may be so diminished as to permit a more satisfactory examination, without which it is imprudent and unsafe to resort to its extirpation.

Appended to the present volume, are the detailed reports of three cases of that most formidable accident, "rupture of the uterus," in which the patients recovered perfectly. It is very singular that, at the period of publication of the first volume of these Observations, in 1820, every case which Dr. Ramsbotham had then seen had, sooner or later, proved fatal; and that, within 12 months afterwards, he witnessed three cases of complete recovery. In two of these, he turned the child himself. We shall briefly analyze them, for the benefit of our readers. In the first, the woman was attended by a midwife, who dispatched a note to the Doctor with these words—"Pray come directly, for the afterbirth is come, and the child is gone." The placenta was found lying in the bed, without any hæmorrhage, and hanging out of the parts by the funis. On passing the finger, no part of the child could be felt; the head, which had previously been well down in the pelvis, had retreated quite out of reach; through the abdominal parietes, the child could be felt by the hand. Without loss of time, the funis was divided and the hand introduced; by following the child into the cavity of the belly, and laying hold of the feet, it was extracted without much difficulty. After delivery, she still complained much of tenderness about the navel, at which part she experienced a most acute pain, immediately before the placenta was expelled. The after-treatment consisted of opiates, leeching, purgatives, and emollient enemata. Dangerous fever supervened; the urine was passed involuntarily; the belly was exceedingly tense and uneasy; but from this state she recovered; and the report, six weeks after the delivery, announces that her only inconvenience arises from the involuntary discharge of urine. A lump or tumour, which she had noticed at the lower part of the belly for some time past, was subsiding. Six weeks after this date she menstruated. In the following year she again became pregnant, and died of flooding when six or seven months advanced. The following are the appearances on dissection.

> "There were several bands or strings of membranous structure just above the pubes; but there were no marks of adhesion of the peritoneal lining of the cavity to the uterus, as I expected to meet with. On dividing into the uterine cavity, the placenta was seen partially separated from its attachment not far from the anterior part of the cervix uteri, to the size of nearly the palm of the hand. The child was now taken out, and the uterus, with the bladder, were carefully examined by a minute inspection. The vagina was considerably contracted, and had an extra opening into the uterus, and another into the bladder. The membrane of the vagina was not carried over the os uteri in the usual manner, but terminated in a valve-like structure; within which was seen the os uteri beautifully studded with its peculiar dark-coloured glands, and unopened.

On dissecting away the cellular membrane and adipose substance from the outside of the fore-part of the cervix uteri, a line or scar was distinctly perceptible; around this part the uterine structure was thickened and considerably contracted. The placenta had been attached internally not far from this thickening; and it appeared to me, that the rigidity or want of extensile power in the uterine structure around this part, had caused that separation of the placental mass, which had induced the fatal hæmorrhage. The ovaria and fallopian tubes were perfectly healthy." 492.

Case 2. The head had already began to bear down on the perineum; suddenly the pains left her. and she screamed out "I am sick—something has bursted in my belly;" and she begged to have a pillow put under her belly, for she could not endure the weight of the child. Violent retching and hiccup came on; the face was of a dark livid colour, and the eyes stared wildly. The head could not now be felt in the vagina—the labour-pains had quite ceased, and she vomited a dark brown fluid. The hand was introduced; and, passing by the head of the child, which was lying just above the brim of the pelvis, both feet were seized, and delivery speedily accomplished. The placenta, lying in contact with the intestines, was then withdrawn. Although the convolutions of the bowels were distinctly felt, the operator was not sensible, either in bringing down the feet, or in removing the after-birth, that his hand passed through any rent of the uterus; it seemed at once to pass into the cavity of the abdomen. Opiates and brandy were given; on the following day blood was drawn, in consequence of pain and tension of the belly. She recovered so well, that, after the expiration of a fortnight, she was free from all complaint except debility. Menstruation returned in two or three months after the accident, and not long afterwards she became pregnant again. It was deemed prudent not to allow gestation to exceed the seventh month; and had not premature labour come on at that period, it was determined to have brought it on. It proved to be an arm-presentation; but no difficulty occurred in turning the child, and the woman recovered without any untoward circumstance.

In the third case, the symptoms were nearly the same as in the preceding; and this woman, too, speedily proved again in the family way. Pregnancy had been allowed to go on till the full period; and, when labour commenced, the pains were strong and expulsive, but the head did not descend. The conjugate diameter of the brim was found to be scarcely three inches; it was, therefore, thought advisable to deliver by perforating the head. In a subsequent pregnancy, the brim of the pelvis was found to be still more contracted, and recourse was, therefore, immediately had to delivery by the crotchet. She recovered, also, from this confinement.

We shall close our review of these observations, by transcribing an interesting case of what may be denominated "uterine apoplexy," or rupture from congestion; and, as it is a specimen of a rare disease, we shall give the details at length.

"I was engaged to attend a young married lady in West Smithfield, who expected to be confined of her first child, the first or second week in January, 1812. She went into the immediate neighbourhood of her own house, to join a party of friends on the evening of New-Year's-Day, being at that time apparently in perfect health; and after she had been among them a few hours, in full enjoyment of the hilarity of the evening, she suddenly complained of being very ill. With great difficulty she was got up stairs, and was seated in an easy nursing chair; presently she fell lifeless on the floor!! The people about her supposed her to be in a fainting fit; a neighbouring medical man was called, who, in the first instance, thought the lady in a state of syncope; but presently pronounced her to be dead!! Some time was lost in the confusion which prevailed in the house; but by and bye a messenger was dispatched for me. I arrived at the house a little after midnight; at that time, the lady had been lifeless at least an hour. Notwithstanding, I would gladly have removed the child by the Cæsarean section, but her friends would not consent to that operation.

Leave was obtained to inspect the body the next day, yet only on condition that a near relative should be present. On dividing the abdominal parietes, the gravid uterus presented itself to view, but very different in its aspect from that which is generally met with. The whole of the fore-part of the fundus, and some portion of the back part of the uterus was completely black, not unlike that appearance upon the skin of a delicate woman, after the infliction of a severe blow. The fallopian tubes were turgid and black; the ovaries were of a natural size, but they had a striated or speckled appearance, somewhat like mottled soap. Upon making an incision into the peritonæal coat of the uterus at its back part, where the black or suffused appearance was the most obvious, fluid blood freely followed the knife. The placenta was attached at the fore-part of the body of the uterus throughout its entire extent, and the child was presenting naturally; the internal uterine surface seemed healthy. The stomach, the intestinal canal, and the other abdominal viscera had the usual healthy appearance. The heart and the large blood-vessels were healthy and sound; within the pericardium was contained a small quantity of serous fluid; the right lung was a little diseased, with trifling adhesions to the pleura costalis; the left lung was healthy. The head was not allowed to be examined.

The above appearances led me to suspect that some large vessel had given way within the uterine structure, the contents of which had been effused into the cellular tissue under the peritonæal coat; producing a state in the gravid uterus similar to that of the brain under effusion beneath its meninges." 507.

Having thus given a very extended and comprehensive analysis of Dr. Ramsbotham's book, we deem it quite unnecessary to expatiate on its merits; our best eulogy is the number of pages which we have devoted to its consideration, for the judgment of a reviewer, like the appetite of a guest, may generally be known from the use which he makes of the viands before him:—We have largely explained to our readers the bill of fare; we have done more—for they have here set before them most of the choicest dishes, and we have given them to taste of the most racy of the wines; but still our advice is, "go unto the feast yourselves," and ye will be largely fed and abundantly satisfied.

Dr. Ramsbotham's observations meet with our very cordial approbation; they are the faithful records of a very ample practice, and coming thus, with all the authority and sanction of multiplied experience and well matured reflection, they cannot fail to exercise a salutary and instructive influence on all those engaged in obstetrical pursuits. To such as are at a distance from the advice and co-operation of their more advanced brethren, we especially commend this volume; they will find it useful as a work of reference, to guide and direct them. It will serve the purpose of a consulting physician, for under almost every circumstance, they will here meet with a corresponding and illustrative example; such is a great advantage of a well-described and judiciously-selected catalogue of cases upon any particular theme; it is like a cabinet of natural history, to which the student refers either to ascertain the name and position of a specimen, with which he is unacquainted, or to refresh and fortify his memory; and so it is with a good case-book, which the young physician may consult to guide and to confirm his practice. Moreover, the information acquired from the reports of actual cases, is always much more impressively stamped upon the mind of the reader than that from descriptive narration, for he is amused and interested while he is instructed. On this account, let the present volume be admitted into the library of every practical man: there is not, perhaps, much strictly novel matter in it, but yet there is much that is important; it is a plain unvarnished picture of what the author has witnessed and done by the bedside of his patients, and of what almost every medical man may be called upon to witness and to do; and, after the study of it, what shall we say of those conceited puppies, or doting fools, who presume to depreciate and disparage the utility and importance of midwifery; or what shall we think of medical colleges, who recognize not its study among the necessary qualifications of their candidates.

One word to our author before we leave:—In a second edition, which we hope will soon be required, let the language and style be well revised and corrected; although manly and vigorous upon the whole, it is frequently rather prolix, quaint, and obscure; such tautologies as "let it be ever kept in mind, and let it never be overlooked;" and "unsuccessfully attempted and repeatedly attempted;" or such expressions as "falling into labour," "in the morning of a certain night!" "the area of a diameter!!" "a child lively and likely for life," and many others, which we have neither leisure nor time to enumerate, ought to be carefully expunged or corrected. Let not elegance of diction and propriety of style, in medical writings, be undervalued by any one; for, as a picture is set off to advantage by a handsome and becoming frame, so is the materiel of a book by the beauty and grace of the language in which it is conveyed. Many of the reports of the cases may also be very advantageously abridged and condensed; the little histories or notices of particular times, events, engagements, and so forth, affixed so often at the commencement of them, should be lopped off. It is not, however, agreeable to look out for blemishes in a pretty face, or in a lovely landscape; neither is it to our taste to expatiate any longer on the minor defects of a good, a valuable, and an instructive work, like that which Dr. Ramsbotham has presented to our review.

II.

OBSERVATIONS ON THE HEALTHY AND DISEASED PROPERTIES OF THE BLOOD. By *William Stevens*, M.D. Octavo, pp. 504. Murray, London, 1831.

THIS is the most trumpery book, for its size, which it has ever fallen to our lot to review. Not but what it is prettily got up, clearly printed, cleanly pressed, accurately folded; manufactured, in short, in a style not disgraceful to Mr. Murray, that Leviathan of booksellers. The printer has done his part—the only fault is in the author. And, with all the intelligence of this century, can no means be found of converting twaddle into logic—false facts into true ones? can no solvent be discovered, which shall fuse the crude fæces of weak men's brains into some precious and goodly stuff? Alas, no! nonsense, with all its trappings, is nonsense still; and the art of all the houses of Paternoster Row and Albemarle Street cannot do more than dress the doll; cannot give resistance and durability to their thing of wax.

Some persons' minds are most felicitously constituted; they believe that they are born to enlighten mankind, and, Shiloh-like, they look upon their stripes as the evidence of their mission. Happy fools! propound your schemes, concoct your theories—if the world laughs at you, laugh at it—if it beats you, defy it—if it for a moment credits you, gull it. The persons we have addressed are not the offspring of this age only, but have certainly adorned every century that has elapsed since man lost Paradise, and fools had the world before them;

—————— In vain decried and curst,
Still Dunce the second reigns like Dunce the first.

At the present day the race is undoubtedly numerous; and the mighty power of the press has tended to multiply them, as Hamlet tells us that the sun breeds maggots. It is often the reviewer's business to encounter these creatures, and it may be supposed that the task is a loathsome one. Who would not rather hunt the boar than the bug? Dulness, unopposed, is more dangerous to science than great, but intellectual error; for one debases and emasculates the mind, whilst the other only tyrannizes over it.

It is well for the human race that the numerous spawn of Dulness are short-lived; generated with facility and dispatch, their existence is little more than ephemeral. But, if the power of the press is wielded with intrepidity and talent, if men of education and of honesty direct it, the sons of Dulness may be strangled in their birth, and the small amount of mischief they are capable of inflicting on the best energies of the species is rendered smaller still.

Our readers will perceive, as we go on, whether these observations can in any way be applicable to the work before us. Dr. Stevens dedicates his production to the King of Denmark, and we cannot but admire the transcendent style in which he sets forth the transcendent virtues of that Scandinavian potentate.* The following passage is rather too difficult of digestion, with all the seasoning of Dr. Stevens' salts:—"The heartfelt interest which you are *known* to take in whatever concerns the welfare of *the human race*, has secured respect and esteem to your Majesty *in every civilized country*." This is pretty well for a beginning, and must create a pleasing anticipation of the candour and judgment of the curer of yellow fever and cholera. Yes, of yellow fever *and* cholera; and that by the self-same slops. When a footman gets his patent for a paste, it is shewn to possess the power of curing all diseases of the rectum, however they may differ from each other. This is the orthodox course of quackery. When a weak enthusiast imagines that he has found a specific for one malady, he is gradually led from step to step, till at last he recommends his drug in all cases, and firmly believes that its powers are real. This is the ordinary course of folly. Let us see what Dr. Stevens has done. He came to England to tell his countrymen that at last yellow fever had lost its terrors, and was not only curable but had been cured by salts. No sooner did cholera appear than the salts were again in requisition, and the *newspapers* speedily informed us that the great Dr. Stevens was curing cholera, as no other man had cured it, by—salts. Now if reasoning is to guide us, there is no great resemblance between YELLOW FEVER and BLUE COLLAPSE, but then the blood is black in both, and salts turn blood in a porringer red, and keep the deep sea from stinking, therefore they are applicable to yellow fever and cholera, therefore they will cure yellow fever and cholera, therefore Dr. Stevens can cure yellow fever and cholera, which no one else can—quod erat demonstrandum. Such, we assure our readers, is the essence of Dr. Stevens' theoretical basis of the splendid practical discoveries, which he tells us, fond man, "will be sure to last." But we will let the Doctor talk in his own tongue. As a sample of his method of reasoning we will give the following passage from the preface.

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* The King of Denmark takes the title of King of the Goths and Vandals; Dr. S. seems to chuckle mightily at having been a loyal subject of this King in his West India Islands—a Vandal of the New World.

> "But fever, at least such as is met with within the tropics, is evidently not the effect of a nervous impression; neither are those fevers produced by local inflammation, either in the brain or the stomach: for often the nervous system is not affected until after the attack; and in certain fevers of a most malignant character there is no crust on the blood; whilst in these, as in cholera, in place of inflammation, there is, in the first stage, a want of circulation—not merely in a part, but in the whole system—which is directly the reverse of inflammatory action. But every drop of the blood is deranged even before the attack, and after this, every fibre is affected, whilst the brain and all the organs are under the influence *not always of organic, but invariably of functional disease.*" xvii.

Now let us look at the Doctor's ratiocination. "Fever," says he, "is not the effect of a nervous impression," "*because* the nervous system is often not affected till after the attack," (assertion 1,)—because "every drop of blood is deranged even before attack," (assertion 2;) "and after this every fibre is affected," (assertion 3,) "whilst the brain and all the organs are under the influence not always of organic, but invariably of functional disease," a conclusion which seems to us to have as much to do with the question at issue, as with the doctrine of Rosicrucius. Again, "fever," says this learned Theban, "is not produced by local inflammation in the brain or in the stomach, for in certain fevers of a most malignant character there is no crust on the blood, whilst in these, as in cholera, in place of inflammation, there is in the first stage a want of circulation—not merely in a part, but in the whole system, which is directly the reverse of inflammatory action." The upshot of this profound piece of reasoning is merely this, that the Doctor is a humoralist of the first water; in fact he is compelled to be so, else where would be the use of his salts "that preserve the waters of the deep." The very motto on his title page is significant of his creed, and its Levitic origin a sample of his physiology—

> "For the life of the flesh is in the blood."—*Levit.* xvii.

The Doctor, we perceive, not only maintains the life of the blood, but actually places in it the life of the flesh also. The wind may be said to be the life of the mill, and on this analogy the blood may be allowed to be the life of the flesh; and as such sort of reasoning is adapted for Dr. Stevens, let us leave him in his Paradise, to fool it at his pleasure.

We do not intend to moot the issue between the Solidists and Humoralists, least of all would we contend with such a personage as Dr. Stevens. Who would seriously argue with a Doctor who writes such sentences as these—"for the vital fluid is the pabulum of the solids, but in fever it is *always diseased, and* (mark the beautiful climax of argument) to use the language of the best observer of Nature that perhaps ever lived, it often, as in cholera, 'turns to an infected jelly,' and those who neglect to attend to this can never be generally successful in their practice." This last admonition is absolutely alarming. Only think of the world having lasted some sixty centuries, whilst the rabble of surgeons and physicians have gone on practising as if they did not know that the blood may turn to an infected jelly! It is really distressing to think what a sacrifice of human life must have been occasioned by this ignorance or neglect, but then, on the other hand, it is delightful to imagine what a saving must hereafter ensue from a proper regard to it. Now that we have read this passage, we cannot exclaim with the Lydian King, that we have lost a day! No, no, the sublime idea of an 'infected jelly' shall henceforth be our beacon and watchword in every trying hour.

In order that our readers may obtain a mathematically precise idea of this stupendous work, we subjoin the following statements. It consists of—Dedication to the King of Denmark, 2 pages—Preface, 14 pages—General Observations on the Blood, 27 pages—on Animal Heat, 18 pages—on Respiration, 26 pages—on the Latent Power of Attraction, a very mysterious section, 38 pages—on Vitality of the Blood, 16 pages—on the Modus Operandi of *Agents* on the Living Body, a subject which, at some leisure hour when the cholera has ceased in Cold Bath Fields, the Doctor may compress in his fashion into as many volumes as he pleases, 28 pages—General Observations on Fever, 190 pages—Copy of a Paper which was read at the College of Physicians on the 3d of May, 1830, 28 pages—Observations and Correspondence relative to the Fever at Trinidad, in 1828, (that is, abuse of Drs. Hacket and James Johnson, "a right pleasante and conceited masque,") 61 pages—on Cholera, 68 pages—Appendix, 8 pages. The total is 523 pages, and considering the sort of stuff impressed upon them, we hereby offer eternal renown to any patient man who will undertake to swear before my Lord Mayor, or any justice of the peace, that he, the said patient man, has read the same without skipping or dozing through any quantity exceeding ten pages at a time.

We can imagine some daring spirits making the trial, and as fancy pictures their bold essay, Pope's celebrated description of the prize proposed to those who could wake over Henley's periods or Blackmore's numbers, rises in all the vivid intensity of ludicrous reality before us.

> "The clam'rous crowd is hushed with mugs of rum,
> 'Till all tuned equal, send a general hum.
> Then mount the clerks, and in one lazy tone
> Thro' the long, heavy, painful page drawl on;
> Soft creeping, words on words, the sense compose,
> At every line they stretch, they yawn, they doze.

Who sate the nearest, by the words o'ercome,
Slept first; the distant nodded to the hum.
Then down are rolled the books; stretch'd o'er 'em lies
Each gentle clerk, and mutt'ring seals his eyes.
As what a Dutchman plumps into the lakes,
One circle first, and then a second makes."

We will candidly confess that we have several times given up the odious task in disgust, and if at last we have contrived to get through the volume, God forbid that we should perpetrate any thing like an analysis of the verbiage and twaddle it contains. As a specimen of the knowledge and information to be derived from it, we take at random the following passage which just catches our eye on the subject of animal heat.

"Every part of the system evidently provides its own heat; and that the quantity generated depends upon the rapidity with which the blood circulates through the extreme vessels, is very evident from what occurs during the process of inflammation. In this disease, though the respiration is not more frequent than in health, yet when the circulation is greatly increased in any one part of the body, the quantity of heat evolved in the affected part is infinitely greater than it is in the rest of the system, where the blood is circulating at its usual rate." 33.

So it is evident to Dr. Stevens that every part of the system provides its own heat. It may also be evident to him that the moon is composed of green cheese, but it does not therefore follow that all thinking persons must be sunk to his level. In point of fact, there is evidence of no such thing; nor will any of our readers fail to see the arch-absurdity of this stupid dogma. Again, says the sçavant, "when the circulation is greatly increased in any one part of the body, the quantity of heat evolved in the affected part is infinitely greater than it is in the rest of the system where the blood is circulating at its usual rate." Was there ever such arrant nonsense? How, in the name of common sense, can the *circulation* be greatly increased in one part of the body whilst the blood be circulating at its usual rate in the rest of the system? But this is of a piece with the rest of the precious production, and we really should be ashamed to criticize the views, if views they can be called, of Dr. Stevens. The utter absurdity of almost every page is only relieved by the amusing array of names dragged in, as some one said on a similar occasion, by the head and shoulders, to give an air of learning and research to the lucubrations. One is irresistibly reminded of the lines in the Dunciad—

Next o'er his books his eyes began to roll,
In pleasing memory of all he stole,
How here he sipp'd, how there he plundered snug,
And suck'd all o'er like an industrious bug.

Our author, indeed, unlike the great man thus immortalized, seems rather to take a pride in *naming* the persons he quotes, and appears to feel the same delight in talking of the Brodies and Prouts, as a retired shopkeeper in recounting the civilities of his dear Lord John, or his very kind neighbour Sir William.

As an instance of the unmeaning manner in which other persons' ideas and experiments are introduced we subjoin the opening of the chapter on respiration.

> "It has been asserted, that the purification of the blood is the effect of the vital principle; but if so, then the air must possess life; for Priestley ascertained that a similar change is produced when *dead* blood is exposed to the air, even through the medium of a dead membrane; and how little either the brain or the nerves are essential to this process has been well proved by the more recent experiments of Mr. Brodie, who found that, when respiration was maintained by artificial means, the blood continued to be purified in the lungs, even for hours after the head of the animal had been cut off; and as this fact is unquestionable, we must look, not to the nerves or the living principle for an explanation of this process, but to the agency of some other power." 45.

The fine bewilderment displayed in the foregoing passage must be too apparent to need exposure. But we repeat that, turn which way we will, we are met with the same stuff, and we positively would not insult our readers by a serious notice of any more of it. We have another duty to perform, and passing over the four hundred and twenty-nine pages of nothingness that precede the chapter on cholera, we come without further hindrance to that subject. We do this the more willingly as Dr. Stevens' speculations on fever and its treatment are not worth our notice, and his statements respecting the fever at Trinidad are sufficiently exposed in the letter from Dr. Hacket in the present number of this Journal. Dr. Stevens enjoys the proud satisfaction of seeing a reviewer, with some character to lose, deliberately assert that he does not even think his views worth ridicule, whilst an able and estimable physician to a military hospital publicly contradicts his assertions. We do not envy him.

Before we pass to the consideration of the chapter on cholera, we will devote a few, and but a few lines, to Dr. Stevens' abuse of Drs. Johnson and Hacket. We shall not rip up the controversy; Dr. Hacket *has* replied, and Dr. Johnson will not. There are some persons over whom victory in a personal contest is humiliating, and such an one is Dr. Stevens. Let him rail then as he likes at Dr. Johnson and Dr. Hacket, and he may be certain that neither of these gentlemen will in future stoop to notice his abuse. Dr. Stevens is not the man to do them injury, and truth would be a scurvy protectress indeed, if her shield received a dint from the shafts of such an adversary. We therefore declare, once for all, that Dr. Stevens may write as many letters as he pleases, in as many journals as chuse to insert them, against Dr. Johnson and Dr. Hacket, without the most distant expectation of the honour of a reply. It is not with Dr. Stevens we are now contending, for, independent of our dislike of personalities, we should feel ashamed to be engaged in so mean a strife. We are demolishing his absurd and contemptible notions, and we venture to say that, after this exposure of the 'saline treatment,' it will sink into utter obscurity overwhelmed by public derision.

Dr. Stevens sets out with condemning the conduct of both the Boards of Health. He then proceeds to say that he has reason to dread that "the metropolis is at this moment slumbering on a volcano of pestilence." This, as the newsmen say, is alarming intelligence, and the metropolis will be greatly obliged to Dr. S. for waking it out of its nap. The volcano, however, is after all a mere popgun, for Dr. S. immediately informs us that "when cholera is taken in time, and *properly* treated, it is in the majority of cases, almost as easily cured as either the common typhus or the marsh fever." After proceeding, in a pitiful tone, to lament that the *facts* which he had stated, relative to the effects of salts on the blood, " appeared for a time to have been almost forgotten," a type of the utter oblivion that will speedily overtake them, he proceeds to say that some gentlemen, " who consider their profession as something more than a trade," advocated the saline treatment.

The public will mark the modesty of this gentleman. Those who do not laud his trash are denounced, by implication, as men who make their profession a trade; whilst those who may happen to approve of his notions are instantly held up as models of disinterestedness and honour. We stand up, in the name of the many professional men whom this Dr. Stevens libels, and repel his foul and foolish slander with utter scorn. If such men as Sir Astley Cooper and Dr. Prout have inadvertently patronized him, we know that they will repent their having been deluded into countenancing his *saline* absurdities. Those who have not been led away, will have the satisfaction of feeling that they have never been praised by Dr. Stevens.

Proceeding to wade through this article on cholera, we are next presented with two letters which appeared in the Medical Gazette, of which it is difficult to say which is most absurd. The first article, or letter, for we know not which it is, was penned by a Stevenite; the other is a sort of second in the duet, by the Doctor himself. The little endearments that pass between them remind one of the caresses of Mrs. Hardcastle and Tony Lumpkin. As they both consist of a sort of exposition of the Stevenian principles, and may be resolved into the Koran of this medical prophet—that salts make black blood in a porringer red, and acids make red blood black, with a number of wise corollaries thereto tacked, we need not exhaust our own patience nor our readers' by much further notice of them. We shall, therefore, only notice a passage or two illustrative of the accuracy and sagacity of this Siamese couple. For instance, No. 1 affirms—" this method of treatment, which Dr. Stevens has the merit of having first proposed, is gaining ground in the West Indies, &c. &c." The etc. etc. is certainly very significant, and a great deal is judiciously left to the imagination. Perhaps we may be permitted to transfer to vulgar prose the hidden sense imprisoned in these cabalistic symbols. We are enabled to do this by Dr. Hacket's opportune letter, in which we find the following glossary on the passage above quoted.

> " I shall now finally state, in answer to all Dr. Stevens urges in his communication, and to shew the profession generally of how much value in practice his doctrines were, and are yet considered in the treatment of tropical fever, that, as far as I could learn, throughout all the following islands, which I lately visited on duty, there is not one convert to his opinions, and that the practitioners generally throughout them cry psha! both to his writings and pretensions at Antigua, Dominica, St. Lucia, Barbados, Tobago, Trinidad, Grenada, St. Vincent. For the last fifteen months that I had been stationed at Antigua, *not one particle* of his 'sodaic mixture' was administered to a *single fever case*, and yet our practice had been equally successful there as at Trinidad."*

So much for the ground that is gained in the West Indies.

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* Vide Dr. Hacket's Letter, p. 591, Extra Limites.

Let us now look a little at the letter of Dr. Stevens himself. It begins thus.

> "As I have never seen even one case of the Indian cholera, of course I can only judge of the treatment of that disease by reasoning from analogy, betwixt this and other malignant fevers which I have actually seen; but probably I was not far from the truth when I stated, that the practice which I had found so useful in the malignant fevers of the western world, *would be equally successful in the treatment of all other forms of malignant disease; and perhaps, also, after this treatment has been fairly tried, the outline of the practice in all malignant diseases will ultimately be nearly the same.*" 440.

Well done! The salines will cure all forms of malignant disease, and the outline of practice will be nearly the same in all. We shall soon have a malignant millennium, and the Procrustian tumbler of salt and water will put out all fevers of all complexions. We shall next subjoin a specimen of another kind, a sample of the Doctor's peculiar ratiocination.

> "The sickness of the stomach which is so generally met with in the commencement of all those fevers that are produced by the specific aerial poisons, is probably the effect of the poison itself, which is thrown out of the circulation, and causes irritation in the gastric organs, in the same way that tartarized antimony produces nausea and vomiting when we inject a small portion of that agent into a vein: when proper remedies are used, that sickness at the stomach which begins with the disease soon passes away; but the peculiar irritation in the gastric organs which comes on at a later period, and which is often so distressing in the last stage, is evidently in these fevers produced in a great measure by an excess of acidity in the stomach. This may perhaps arise from the decomposition of the saline ingredients of the blood by the nervous or electric fluid which appears to exist in excess in all fevers, but particularly in those of a malignant character." 441

Clever analogical reasoning this, to compare the nauseant effect of a poison, "thrown out of the circulation," with that of tartarized antimony thrown into it. Then, the sublime idea that the acid is produced by the decomposition of salts by "the nervous or electric fluid, which appears to exist in excess in all fevers." O rare physiology; O happy pathologist! Again—

> "There is no question of the fact, that there is in all the malignant fevers of the new world, particularly in the last stage of these diseases, an excess of acids in the alimentary canal, which extends from the very tip of the tongue to the verge of the anus." 441.

Now does Dr. Stevens know, or does he not, that if a piece of litmus paper be applied to the tongue of any one in health, it is rendered acid—in fact, that the saliva is acid? If he does, then why should he wonder at the circumstance in fever; if he does not—but why should we express what every one must feel.

> "When we apply at this period of the disease a piece of litmus paper to the foul or red irritable tongue, the test is reddened almost instantly; and when we apply the same paper to the fluids ejected from the stomach, it is reddened almost as suddenly as if it had been dipped in a pure acid." 442.

Did ever Dr. Stevens test the matters vomited, under ordinary circumstances, from the stomach? If he did, we need not tell our readers that he found it acid, at least we never saw it otherwise, and God knows we have consumed many a sheet of litmus paper in this and similar experiments.

In fact, it is lamentable to see the intelligence of the profession insulted by such trumpery arguments and ridiculous assertions. The story in the Arabian Nights' Entertainments, of the enthusiast who purchased some crockery, and arranged the mode of making his fortune and procuring the hand of the Princess of Bagdad, must be familiar enough; Dr. Stevens' saline crockery is to do as much for him.

> "By this treatment we not only remove that irritation and severe burning in the stomach which is so distressing to the patient, and even so destructive to the gastric organs, but we gain another point, which is, at this period of the disease, of still more importance than the mere removal of a local irritation. The fixed acids are, as I have said, immediately neutralized by the alkali of the carbonate. The muriate of soda, and the other natural salts of the blood, are instantly formed in the stomach itself. Now we know that these salts do enter the circulation; we know also that they mix with, and become a part of the circulating blood; we know that they change its properties and remedy its morbid condition; we know also that they add to the stimulating power of the circulating current, and enable the heart to keep up its action.
>
> In consequence of this addition of saline matter, the kidneys, and the other secreting organs, continue to perform their functions. The skin does not become yellow, nor the breath fetid; neither is the mortality one-twentieth part so great as it had been under the old modes of treatment. In fact, the successful results which have already followed the use of the above practice, prove that the saline remedies are the agents of all others the best that we yet know of, for the successful treatment of malignant diseases." 444.

Like a lively flea, the Doctor hops with surprising vigour from assertion to assertion, until he satisfactorily ascertains that his treatment is the very best that has ever been devised by the wit of man. Be it so.

> "The dark colour of the blood, which we observe in the beginning of pestilential fevers, is the effect of the poison on the vital fluid; but the blackness in the last stage of these diseases is produced *by the loss of the saline ingredients*, which I can prove are beyond all question the true cause of the red colour of healthy blood." 445.

In this short passage there are three assertions, not one of which is easily proved. But this is of a piece with all the rest. We solemnly declare that we do not believe there has ever been published a medical work containing a greater mass of reckless, unproved, and improbable assumptions, stuck together with such a putty of ridiculous reasoning. A connected criticism of such twaddle would be next to impossible, for one would have to argue every sentence. The severest censure is to expose passages, in the nakedness of their nonsense, to public laughter. We are told by Stevens, that the salines should be given in the collapse stage of fevers or cholera, because they enter the circulation and are stimulants; but such is their wondrous power, that we are also to give them in the stage of reaction, because they prevent a black and dissolved state of blood.

> "When this (fever) is effected (by the stimulant salines), should the re-action run high, the excitement may be reduced by the use of the lancet, and the typhoid symptoms, which sometimes afterwards occur, may probably be prevented by the subsequent use of the carbonate of soda and other saline medicines, which we know do possess the power of preventing that black and dissolved state of the blood, which is, in reality, in fever, the true cause of the nervous as well as the other bad symptoms." 449.

Thus we are told the usual story; the remedy is good for the cold stage and good for the hot—cures yellow fever and blue cholera—is the best treatment known for *all* malignant diseases. We suppose that by and bye Dr. S. will denounce all remedies but salines, like the Kaliph Omar, who burnt the Ptolemæan Library because it contained more or less than the Koran.* Let us take another specimen of Dr. Stevens' reasoning.

> "I know it will be asked, why have the citric and other acids been successful in scurvy, where the blood is darker than it is in health? To this it may be answered, that the scurvy is not, like the cholera, or the yellow fever, a disease that causes death in a few hours, or a few days; and therefore medicines that may be used without causing immediate death in the one, cannot be used in the others with equal impunity. My own conviction is, however, that there is no one disease in the whole catalogue in which the profession has been so much misled as in the very disease now under consideration. During a residence of twenty years in the West Indies, I have only seen one case of scurvy, and *that case was decidedly brought on by the excessive use of citric acid, which an American gentleman had been recommended to use as a preventive against the yellow fever*. His own conviction, as well as mine, was, that the scorbutic symptoms had been brought on by the acid. This was immediately laid aside, and, under the use of the carbonate of soda, he was completely cured in three weeks." 451.

Thus, Dr. Stevens never saw in the West Indies but one case of scurvy, and on the strength of this he denies the efficacy of the vegetable acids, a fact established by facts of a very different description from those of Dr. Stevens'. It would be very inconvenient, in sooth, to allow that a disease, characterized by black and dissolved blood, can be brought on by a diet containing much of the identical salt which is to remove such a condition. See to what shifts the Doctor is reduced, when, to answer such an objection, he tells us that one gentleman made himself ill by "an excessive use of citric acid," and was cured by carbonate of soda—a very likely circumstance. The quibble on scurvy not being, like yellow fever, an acute disease, is laughable enough, and would be apparent to a school-boy.

We now arrive at the Cold-Bath-Fields affair. We have hitherto had to do with doctrines too absurd to require argument, assertions manifestly unsupported or insupportable, and facts which, however one might disbelieve, it would be difficult and troublesome to disprove. But here we have the practical application of the saline treatment—we have the doughty Doctor dispensing its benefits with his own discriminating hand. All this happens in our own country, in some degree beneath our own eyes; and, therefore, we have a better opportunity of testing the value of the practice than when the scene of action is in the Danish West India Islands. To this ordeal Dr. Stevens should confidently appeal, if his cause were good. We shall see how he will come out from it. As it is of consequence to lay the whole affair before our readers, we shall do so most impartially. Dr. Stevens may be assured that, from us, he shall have justice, if we do not grant him mercy.

> "In the beginning of April, I received a note from Mr. Pout, a medical gen-

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* On the gates of this library were inscribed the words ΨΥΧΗΣ ΙΑΤΡΕΙΟΝ—Physic of the Soul, whence Pope's lines—

"From shelves to shelves see greedy Vulcan roll,
And lick up all their physic of the soul."

> tleman in Albany-street, who called to inform me that the cholera had broken out in the prison at Cold Bath Fields, and that he had been requested by Mr. Wakefield, the surgeon who had charge of the prison, to say that he would be glad to show me the cases; and from what he had heard of the saline treatment, he should be very willing to give it a trial—the more so, as he had now no longer any faith in the common remedies.
>
> On the receipt of this message, I immediately went to the prison; and after some conversation with Mr. Wakefield on the subject, he not only agreed to adopt the saline treatment, but invited me to attend the cases along with him. He consented also that Mr. Crooke, a young medical gentleman who had lived with me for several years in the West Indies, should be allowed to remain constantly in the prison, to see that the medicines were faithfully administered, *as well as to take notes of the cases.*" 458.

Here was every thing Dr. S. could wish—a *prison* to himself—a surgeon evidently anxious to second him—and a pupil of his own, Mr. Crooke (a rather ominous name) to take notes. What else could be desired? The following is the outline of the treatment pursued by Dr. Stevens "not only in the prison, but every where else." To prevent a chance of even misconception, we shall give his own words.

> "First. The treatment was generally commenced with a Seidlitz powder, which was given with a view of lessening the gastric irritation, and partly for the purpose of removing the diseased secretions from the intestinal canal.
>
> Secondly. When the stomach was irritable (which it generally was) a large sinapism was immediately applied to the epigastric region, and where the patients were cramped in the extremities, frictions were used with hot flannel. The pain produced by the spasms in the muscles were not only relieved by the frictions, but by this and the application of sinapisms to various parts of the body, the quantity of animal heat was increased, and this, I need scarcely say, is an object of great importance in the treatment of cholera.
>
> Thirdly. A powder containing—
>
> Carbonate of Soda, ʒss.
> Muriate of Soda, ℈j.
> Chlorate of Potass, grs. vij.
>
> was dissolved in half a tumbler of water, and given soon after the Seidlitz. In severe cases, the above powder was administered every half hour. In those that were less severe, it was used every hour, and in some malignant cases it was given every fifteen minutes. In short, it was given more or less frequently according to the circumstances of the case, and continued until the circulation was fairly restored; it was then given at longer intervals, and when the re-action was completely established, it was left off by degrees.
>
> Fourthly. Where the stomach was irritable, the use of the above powder was occasionally suspended, and common effervescing mixtures, or small doses of the common soda powders, with an excess of the carbonates, were frequently used, until the irritation was lessened, and then the carbonate of soda with larger doses of the chlorate of potass were generally given without the addition of the muriate of soda, and frequently in such cases the chlorate of potass was given by itself, in doses containing ten grains each.
>
> Fifthly. A solution of muriate of soda was also thrown up into the intestines, at as high a temperature as the patients could well bear this saline fluid.
>
> Sixthly. In two very severe cases, which occurred out of the prison, the patients were put into a hot saline bath with evident advantage. It is well known, that a hot saline fluid is a better conductor of heat than fresh water at the same temperature; but, independent of this, a part of the saline ingredients may be absorbed from the skin, and the patients may also be benefited by respiring the

hot saline vapour. It is but fair to state, however, that this means, which was evidently beneficial in the cases in which it was tried, was proposed by Mr. Marsden, one of the surgeons to the Free Hospital in Greville-street.

Seventhly. Seltzer water was allowed *ad libitum*, when the patients expressed a desire for something to drink. A strong infusion of green tea was also occasionally used, in severe cases, apparently with advantage.

Eighthly. It was considered essentially necessary to keep a large fire, both night and day, in every room where there was a patient with cholera. It is now well known that in by far the majority of cases, the collapse commences betwixt two o'clock in the morning and six, a. m., or, in other words, at the period of the twenty-four hours when the atmosphere is coldest: from which it appears that external cold acts as an exciting cause to the state of asphyxia. But independent of this, we have seen that the degree of force, with which oxygen can remove carbonic acid through the medium of a membrane, depends, in a great degree, on the temperature of the two fluids. Now, when the temperature of the blood is so very low, as it is during the state of collapse, and if the air which the patients then breathe be also cold, the small quantity of carbonic acid which exists in the black venous blood, will not be attracted by the cold air, and consequently this of itself may be one cause of the sudden death.

Ninthly. It is necessary to be very careful not to dismiss the patients as cured until they have been, at least, several days completely out of danger. Two of the cases which proved fatal in the prison, at Cold Bath Fields, were lost from our not having been at that time sufficiently aware of the importance of this.

Tenthly. The patients ought not to be allowed to use one particle of solid or indigestible food, for at least five days after they have recovered from the state of collapse. We nearly lost more cases than one, from the too early use of solid indigestible food; and one woman, a nurse in the London Free Hospital in Greville-street, actually died from this cause, after having been considered as completely out of danger from a most violent attack of cholera accompanied with collapse.

Eleventhly. Those who put their patients under the saline treatment, ought to trust almost entirely to this; for if they use calomel, brandy, or other destructive agents at the same time, they will do little good; but above all, *not one particle of opium ought to be given internally*; for, from what I have seen, I consider this to be as fatal in cholera, as it is in the last stage of either the African typhus or the seasoning fever of the West Indies. Where the stomach, however, is extremely irritable, *about twenty-five or thirty drops of laudanum, diffused in a little tepid water, may be injected with a small syringe into the rectum, not only with impunity but considerable advantage.*

When the stomach is very irritable, small quantities of milk, with carbonate of soda, may be given occasionally; and when we use the saline powders in such cases, they ought to be dissolved in a very small portion of water.

When the case is exceedingly malignant, or where we are called in late in the disease, and find the patient already in collapse, we ought then to have recourse to the most active measures. An ounce of the muriate of soda, with half a drachm of the chlorate, or the muriate of potass, should be given immediately in cold water, and repeated, if necessary, every half hour, until the patient has taken about three doses of this strong solution. *Should re-action be brought on by this,* it may then be kept up by the common saline powders; but should this experiment fail, we may then, as a last resource, give the patient another chance for life, by injecting a saline fluid into the veins.

The ejections, and every other source of impurity, ought to be immediately removed from the room where the patients are; and the infected wards should be fumigated at least twice a day with gunpowder, and every particle of suspicious clothing, bedding, &c. should be boiled, for at least half an hour, in a strong solution of common soda." 463.

We shall only make two observations on this. If opium be so pernicious why should Dr. S. find benefit from an enema of laudanum? Is there any power or property in one end of the intestinal tube of correcting an agent which is noxious when introduced into the other? Is not this so far from being true, that some practitioners, the Baron Dupuytren, for example, believe that opium exerts its specific effects most powerfully when used in the form of injection? In fact, this passage is a pathological shuffle. The Doctor found that his bumpers of salt and water would not arrest sickness, and, being compelled to give opium, he compounded with his creed, and gave it by the anus. The other observation we have to make is this. The Doctor applies his saline treatment to clothes as well as Christians, the common soda neutralizing, we suppose, the *acid* cholera that lurks in the dirty linen. What shall we say to the explosions of gunpowder in the wards at least twice a day. We wonder the Doctor did not borrow a park of artillery; these periodical fire-works must certainly have relieved the ennui of Mr. Crooke, and formed an agreeable divertisement amidst the monotonous uniformity of diarrhœa. Having given the treatment, the Doctor next offers "what he believes is a fair statement of the outline of the result."

> "The three first cases which occurred in the prison were treated by Mr. Wakefield in the common way—with opium, brandy, the hot-air bath, &c.; but they all died after a very short illness. Almost immediately after this, another case was treated in a similar way by another practitioner, who had been sent for to the prison during the night, in consequence of Mr. Wakefield being unwell at the time. This gentleman was not then aware that any new practice had been adopted in the prison. He treated the patient *secundum artem*, with brandy, opium, and chalk; but the result was, that this patient was past all hopes of recovery before either Mr. Wakefield or myself saw him in the morning;—consequently, in the four cases that were treated in the prison in that way, there were four deaths and not one recovery under the common practice.
>
> It may be proper to state, that previous to the beginning of April there were no bowel complaints in the prison, and the whole of the prisoners were then as healthy as they generally are at that season of the year. The first case that was reported to the Board of Health occurred on the 5th of April;—the saline treatment was commenced on the 8th. There were in all at that period about one thousand three hundred souls in the prison; and from the 8th of April to the cessation of the first epidemic, there were at least one hundred individuals who were evidently, *more or less*, under the influence of the poison.
>
> In about fifty of the above cases, the patients were attacked with *a bowel complaint*, and most of them had, *more or less*, irritation at the stomach. The fluids that were ejected were generally deficient in bile; and the bowel complaint was attended with the following peculiarities:—
>
> First. The inclination to go to the night-chair came on more suddenly than it generally does in cases of common diarrhœa.
>
> Secondly. The ejections were less bilious than in common diarrhœa; and opium, chalk, astringents, &c., which are generally useful in cases of common bowel complaints, *were of no use in checking the diarrhœa, which occurs when the patients are under the influence of the cholera poison.* These remedies were chiefly used in cases which occurred out of the prison; but they evidently had no effect in checking the specific ejections which are produced by the cholera poison; and this I presume was the cause of the diarrhœa which occurred in the fifty cases in the prison to which I refer. The whole of these were immediately put under the saline treatment, and this appeared to give an immediate check to the disease; and I believe it was owing to the saline remedies, *as well as to the*

circumstance of their being constantly kept in a warm room, and well taken care of, that not one of these cases ended in collapse: consequently, though they were constantly breathing in an atmosphere completely impregnated with the poison, yet not one of them was lost.

There were also about thirty-one similar cases, in which the above symptoms were still more distinctly marked, and *in many of them the bowel complaint was more or less accompanied with cramps.* These were all treated in the same way with the non-purgative salts, and in three, four, or five days, every one of them were sent from the observation ward, as we believed at the time, completely out of danger. I am sorry, however, to be obliged to add, that two of these cases which had been unfortunately dismissed too soon, and sent back as cured to the cold wards of the prison, were attacked with collapse during the night; and *before they could again be put under the saline treatment,* their stomachs were so irritable that they could scarcely retain even a teaspoonful of water; and both these cases proved fatal in a very short period from the commencement of the collapse.

In addition to the eighty-one individuals already referred to, we had about nineteen cases in the prison, where the patients were either attacked with the disease, and got into a state of asphyxia in the cold wards of the prison during the night, or where the stomach was so irritable in the first stage *that it could not retain the stronger salts.* In almost every one of those cases the disease assumed a most malignant character. These were all treated with the energetic non-purgative saline remedies; and in the nineteen malignant cases to which I now refer, we had eighteen recoveries, and only one death: consequently, the total number of patients, who were all evidently under the influence of the cholera poison, was about one hundred, yet in those cases where we trusted almost entirely to the saline practice, we had only three deaths, and ninety-seven recoveries.

In corroboration of the above statement, I will insert here the following letter from Mr. Wakefield, which was published in the Medical Gazette for April 28, 1832." 466.

According to Dr. Stevens' own shewing, fifty individuals out of about one hundred, had "a bowel complaint, and most of them had more or less irritation at the stomach." Of these none died. Now Dr. Stevens asserts that the remedies which are generally useful in common bowel complaints are of no use in checking the diarrhœa which occurs when the patients are under the influence of the cholera poison, thereby of course implying that of the fifty persons so attacked with diarrhœa many would be lost under ordinary treatment. We contradict Dr. Stevens. If by diarrhœa arising from the influence of the cholera poison, Dr. Stevens means that diarrhœa which has lately been so prevalent, and which, when neglected, has run into absolute and fatal collapse, we most positively deny that "common remedies" will not cure it. We need not appeal to our professional brethren in confirmation of our statement, as the remark has been publickly and frequently made since the prevalence of cholera in England. It must be remembered too, that the Cold Bath Fields patients were immediately attended to, "constantly kept in a warm room, and well taken care of." Where is the wonder that out of fifty such cases of diarrhœa none were fatal. We are not even surprised at the salt and water having done no mischief.

But there is one statement so extraordinary that we cannot but take notice of it. Two patients sent back to the cold wards of the prison, "were attacked with collapse during the night, and before they could be again put under the saline treatment their stomachs were so irritable that they could scarcely retain a teaspoonful of water; and both these cases proved fatal." What then, does it occupy some time to put patients upon the saline treatment, and will this be of no avail if there is great irritability of stomach? One would think that the salt and water could be soon procured in a place where it must have formed a staple commodity—in a place attended by two saline doctors, and inhabited by a saline house-surgeon! Yet it was not so. The saline treatment, we infer, will not do when there is extreme irritability of stomach. Now, such is our simplicity, that we always considered this symptom as one attending a large proportion of the cases of malignant cholera. We have seen this instant a case which will probably be fatal, where this is a very prominent symptom. Yet it seems that salines did not succeed in two instances, because this was established! Can none of our readers smell a rat—can they not perceive that two severe cases having really occurred, the salines were of no more use than ditch water?

Eighty-one cases then out of the hundred were of the kind alluded to—cases which would never have been fatal under ordinary care and treatment. The remaining 19 patients "were either attacked with the disease and got into a state of asphyxia during the night, or the stomach was so irritable that *it could not retain the stronger salts.* Of these 19 one died.

Next we have a letter from Mr. Wakefield, crying double to Dr. Stevens' just quoted. There are only two additions requiring any notice. In alluding to the 81 cases before referred to, Mr. Wakefield goes even farther than Dr. Stevens—he *believes* that one half would have been lost under ordinary treatment!

> "I believe also, that had they either been left to themselves or improperly treated, the majority of these cases would have run into a state of collapse, perhaps in a few hours; indeed I have little doubt that the one-half of them would have been lost under the practice which is generally adopted in the treatment of this disease." 468.

Agreeing with the doctrine that no man can be justly blamed for his beliefs, as they are in a great measure independent of his *inclination,* we only record Mr. Wakefield's, and pass on. The second point is this. Mr. W. states that he has had one most malignant case in the New Prison at Clerkenwell, where the patient was in a complete state of collapse before he saw him.

> "His extremities were cold; his pulse at the wrist was entirely gone; he had the cholera voice, and his tongue was icy cold. This man, like those in the other prison was immediately put under the saline treatment with the happiest effects, and I consider him now in a state of convalescence." 469.

Many such cases as these would be important, if true. Such was the first irruption of cholera which occurred in Cold Bath Fields Prison. It commenced in the beginning and terminated on the 30th of April. The second irruption began on the 3d of June.

> "In this instance it commenced amongst the females, and soon spread almost all over the whole establishment, and is now at this moment much more virulent, and I am sorry to add, *more fatal,* than it has ever been at any former period. In the first case that occurred the woman was attacked on the night of the 3d, and died on the 5th. Her sister, who attended her, was next taken ill, but recovered under the saline treatment.

Soon after the commencement of this second irruption, I called at the prison, and there were then four cases. These were under the saline treatment, and as they were all doing well, I did not return. On the 21st of June, however, I received a note from Mr. Wakefield, requesting me to meet him at the prison as soon as possible. When I went there, I found about twenty patients with cholera, and out of this number five were actually dying. *There was one obvious cause for this, which I do not feel myself at liberty to point out,—suffice it to say, that it originated from either a mistake or neglect on the part of the nurses who administered the medicines.*

A saline fluid, similar to that which had been used at Leith, was injected in two cases, into the veins; but the one died almost immediately, and the other though he rallied for a time yet he also ultimately died.

From the commencement of this second irruption there have been in all, about eighty-one cases: *many of these* have been of the most malignant description. Out of this number *there have been thirteen deaths,* and the other sixty-eight have either recovered or are now apparently nearly out of danger; but new cases are brought into the infirmary almost every hour. They are all of them however now under the most energetic treatment, and I sincerely trust that the mortality of the disease will be arrested in its progress." 472.

In another place Dr. Stevens adds—"We have now had, during the present irruption in the prison, one hundred and five cases, and fifteen deaths, and there are at this moment in that establishment twenty-two patients *who have recently recovered from a state of complete collapse.* But though the proofs in favour of the saline treatment were as numerous as the sands on the sea-shore, still there are individuals who will deny its utility—and that too in a manner which can neither do credit to themselves nor good to humanity."

In this second irruption the cases were more severe, and what was the result? Out of 81 patients 13 died, or one in six. Now these 81, comprising all attacked, were in all probability a mixture of cases of different degrees of severity, for all practitioners must have found, that of a certain number of cases occurring in any locality the number of those decidedly malignant would not be very great. In the present instance, even Dr. Stevens, he who pretends that the cholera diarrhœa is not curable by ordinary remedies, allows that of the 81 only "many" were of the most malignant kind. Now the proportion of deaths in the malignant cases in Great Britain has been little more than one in three, yet this so vaunted saline treatment saves one in six out of 81 cases, of which only "many" were most malignant. Is it possible that this transparent veil of fallacy can obscure the truth. Again, we see by the note to the passage quoted, that the muriate of soda is too apt to run off by the bowels. This note seems to refer to saline injections into the veins, but if it be true of them, it is still more likely to be so of muriate of soda swallowed. So the saline doctrine turns out to be Hahnemannian, curing diarrhœa by producing it—a rare discovery. The doctrine however is not so contemptible, as appears by the following testimonial awarded by the magistrates of the county to Stevens, Wakefield, and Crooke.*

(Continued at page 422.)

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* This article having extended to a greater length than was anticipated, it has been necessary to remove another, in order to make room for it. This will explain the erroneous notation of the succeeding articles.—*Ed.*

IV.

A PRACTICAL TREATISE ON UTERINE HÆMORRHAGE, IN CONNEXION WITH PREGNANCY AND PARTURITION. By *John T. Ingleby*, Member of the Royal College of Surgeons in London, one of the Surgeons to the General Dispensary, Surgeon to the Magdalen Asylum, and Lecturer on Midwifery at the School of Medicine in Birmingham. One Plate, 8vo. pp. 276. London, 1832.

(Continued from page 214 *of this Volume.)*

UTERINE hæmorrhage is particularly apt to occur after quick labours. To obviate this Dr. Clarke recommends, in addition to Osborne's plan of retarding the passage of the head, that the contractions of the uterus may be assisted by the other hand placed on the abdomen for the purpose. This practice was recommended by Dr. Gooch, and is considered by the author as a measure calculated materially to effect the object in view. In proof of this a case is adduced, in which a mechanical impediment had the effect of delaying the expulsive efforts, and of preventing hæmorrhage, which on former occasions, when the labours had been very quick, had taken place immediately after the birth of the child in the same patient, to such a degree as to expose her life to imminent danger. In such alarming instances as these the surgeon should invariably, after the birth of the child, promote the contraction of the uterus by external pressure, and take care to avoid all extracting force with the funis. By adopting these precautions the hour-glass-contraction, which is one of the greatest misfortunes attending hæmorrhage from the uterus, and a frequent concomitant of it, may be avoided.

The vomiting, which accompanies *laceration of the uterus*, generally distinguished by its sudden and violent attack, appears to the author to be in great measure dependent on the effusion of blood consequent to the injury. He had an opportunity of examining the bodies of three persons who died from this accident. In two of them blood was found extravasated profusely within the pelvis and abdomen, and vomiting had supervened immediately after the rupture. The third patient had no vomiting, and the quantity of blood, discovered on dissection, did not exceed an ounce.

Rupture of the uterus has been generally considered a fatal accident. A case of this kind occurred in our practice some years ago, in which the rupture was so complete, that it extended through the peritoneal coat, and enabled us to pass the hand amidst the other contents of the abdomen. After experiencing all the usual alarming symptoms peculiar to this accident and severe peritonitis, the woman at length perfectly recovered.

On the subject of *vomiting* the following question occurs :—

> "When the vomiting which attends early pregnancy continues, in persons who have previously enjoyed good health, through the middle and latter months, increasing in severity and accompanied by a dangerous prostration of strength, I wish to ask, whether, in the failure of all ordinary resources, and particularly in the absence of any organic disease, the membranes should be ruptured with a view of inducing premature labour?" P. 41.

In his lectures, published in the Lancet, Dr. Blundel, as a last resource, proposes, but does not appear to have adopted this expedient. Conquest observes that it is now and then essential to the safety of the patient. In the author's practice one patient expired before the completion of the ninth month from exhaustion; in a second, death speedily followed delivery; a third was decidedly relieved by the spontaneous rupture of the membranes; a fourth connected with abdominal encysted dropsy, which brought on a fatal termination, was relieved by the induction of premature labour. In our own practice several instances of excessive prostration of strength and exsanguine aspect have been produced by extreme and continued vomiting in the advanced stages of pregnancy. They have all been relieved by the recumbent posture, attention to the bowels, and the regular daily administration of the citrate of potash in a state of effervescence. In these cases the mode and period of exhibiting aperients is of the utmost importance. Should any obvious necessity arise in such cases to puncture the membranes, we should have no hesitation to adopt such an expedient; all the common resources having been attempted in vain. We should first be disposed to try the effect of hydrocyanic acid, which in the practice of Dr. Elliotson of London, and Mr. Garner of Nottingham, seems to have acted with specific influence in removing this symptom. Of its curative properties in the treatment of pyrosis we can speak with the fullest confidence.* The author has not thought it necessary to mention the effect of local bleeding or stimulation in the epigastric region; but from the high opinion we have formed of his extensive information, we have no doubt he has availed himself of such expedients.

Since we have seen some of the functions of the cerebrum, the cerebellum, and spinal medulla suspended, and other extraordinary morbid sympathies developed by utero-gestation, and removed by parturition; we should be inclined to recommend the puncture of the membranes in all alarming diseases, evidently associated with and induced by the gravid uterus; and, when the operation is conducted with care towards the termination of pregnancy, it will generally be followed by safety to parent and child.

For the relief of *ascites, occurring during pregnancy*, and proceeding from serous inflammation in the free surface of the peritoneum, Mr. Ingleby asserts, in opposition to the advice of Dr. Blundel, that paracentesis of the abdomen is infinitely preferable to the evacuation of the liquor amnii. When bleedings, bandages, diuretics, &c. have no effect, Dr. Blundel directs us to rupture the membranes: as he observes that death, under these circumstances, has taken place from hydrothorax.† The author next details the particulars of the case of dropsy, recorded by Mr. Langstaff in the Medico-Chirurgical Transactions, in which paracentesis abdominis was had recourse to with complete success.

Sickness in the earlier months of pregnancy seems to be almost essential to the process: it is at least generally present; and a case came under the observation of our friend, Mr. J. M. Coley of Bridgnorth, in which it was found necessary to excite it daily, in order to obviate abortion, which had repeatedly taken place apparently from its absence alone.

From exhaustion, mental agitation, or the collapse consequent on the sudden expulsion of the fœtus, *syncope* sometimes takes place, especially when the application of the bandage has been neglected. In this way sudden death may also occur. The means of relief consist in external pressure on the abdomen, the horizontal position, stimulants, and cool fresh air. The attack is liable to supervene under circumstances, in which an atonic state of the uterus is not present, and the mind appears to have been antecedently depressed by some unhappy forebodings. An instance of this kind is recorded, in which death was the consequence; and we could add several others to the melancholy catalogue.

When fainting is occasioned entirely by profuse hæmorrhage, the use of stimulants requires the nicest management; as it is one of the most effectual means which Nature provides for the suspension of the discharge. This remedy may however be carried too far, and, if not averted by art, may prove fatal. By a judicious use of stimulants, of which subcarbonate of ammonia is one of the safest, at the proper crisis, life may often be restored, after it has apparently been entirely lost. Our friend, Mr. J. M. Coley, to whom we have before alluded, thus succeeded in reviving a female, who had been left by her surgeon as a dead person, and absolutely laid out by her attendants. When not fatal, long-continued syncope from excessive loss of blood is generally followed by disordered function in the heart and brain. The influence exerted by hæmorrhage on the heart is of the most frequent occurrence; as dyspnœa, violent palpitations, hurried circulation, and a peculiar state of pulse, indicating a want of tone or contractile property in the arteries. This condition of the heart and arteries is best relieved by subcarbonate of iron in combination with small doses of digitalis occasionally intermitted.

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* For further information respecting the exhibition of prussic acid we refer our readers to Lancet, Vol. XX. p. 202, and p. 650.—*R.*

† Lancet, Vol. XV. p. 420.

Amongst the cerebral affections resulting from violent hæmorrhage may be mentioned epilepsy, paralysis, or some disturbance of the mental functions.

Much dispute has existed respecting the properties of *opium*, and its use in uterine hæmorrhage. The author is of opinion that, when administered to a patient exhausted by this cause, it acts in a large dose as a cordial, and appears to him to possess advantages over the common spirituous stimuli. In support of this opinion he adduces the authority of Burns, Gooch, and Hamilton. The condition in which it is found most beneficial, is that in which great restlessness and irritability are present; and the dose in which the author prescribes it, is from one to two drachms of the tincture, and from two to five grains of the powder. When deglutition is suspended, the opiate may be injected per anum. As large a dose as ℥ss. of the tincture has been successfully administered, without any unpleasant consequences. It may be necessary to repeat the medicine at distant intervals, until all danger of collapse should disappear. Among the unpleasant secondary, or sedative effects of the opium, retention of urine is not uncommon; although it appears to have escaped the author's vigilant attention. The indiscriminate use of narcotics, after every labour, is very prudently objected to by him.

As an auxiliary means of restraining uterine hæmorrhage, napkins moistened with cold water should be applied to the pubic region and the loins. The author lays much stress upon the frequency and the suddenness of the application, which may be aided by pouring the water from a height above the patient. As soon as we have accomplished our object, the remedy should be set aside, and the state of collapse, if present, cautiously removed, by warmth conveyed to the epigastrium and extremities. When the external use of cold water has not succeeded, the author has witnessed the most active contractions produced by its injection into the cavity of the uterus. In protracted hæmorrhages he observes that cold solutions of alum and the injection of cold water into the intestines, according to Dr. Hamilton's directions, have been most beneficial.

The author seems to be a convert to the belief of the existence of *muscular fibres in the uterus*, and to the pressure produced by their contraction he attributes almost entirely the suspension of hæmorrhage. This process, he thinks, is much promoted by the excess of lymph prevailing in the blood during gestation, which appears to him to be designed by Nature for the purpose of closing the mouths of the vessels and preventing that oozing, which would otherwise continue after contraction. Whether the walls of the uterus be built with muscular fibres or with a substance sui generis, it is very obvious that they possess the power of contracting the capacity of the organ, and that this is the principal instrument by which the diameter of the bleeding vessels is reduced; in short by which the powerful effects of pressure are accomplished in a situation, where, without its co-operation, external agents would be unavailing.

The author next enters into a luminous account of the *structure and physiology of the placenta*, and concludes by adopting the view taken by Dr. Blundel of the nature of the communication between the parental and fœtal circulation.

"On the whole I cordially enter into the view propounded by Dr. Blundel, that the communication is by exceedingly minute orifices or tubes, capable of transmitting the more subtle (subtile) parts of the blood, for instance the serum and the coagulable lymph, to the exclusion of the red particles. This partial independence of life is doubtless designed to answer some wise purpose of the animal economy—perhaps to obviate impressions, both physical and mental, calculated either to impair the regular growth of the body, or to destroy life. Sir E. Home's alleged discovery of nerves in the placenta appears to be mere imagination." 75.

The specific effect of the *ergot, or spur or horn of rye,* which appears to be a fungus, to which that grain is liable, is next noticed. The author's experience does not seem to have afforded him any proof of its possessing the power of originating uterine action, which has been attributed to it by some writers, particularly Dr. Neale.

"The ergot often induces violent uterine action. The degree of violence may be inferred from the fact, that a spasmodic disease is described by Tissot, as resulting from the use of bread, containing ergotted rye. I have generally found its effects uncertain; and, exclusive of its frequent adulteration, as the ergot is a morbid change of the grain of the rye, its properties vary with the variation of the season. This uncertainty cannot be altogether ascribed to the inefficacy of the diseased grain; since the same specimen has produced a material effect upon one individual, yet not the slightest effect upon another, even when exhibited in the same doses and form. In many instances it either produces no effect at all, or is too transient in its operation to promote the expulsion of the child. In such cases, the dose may be renewed on the action subsiding, and by rousing the dormant energies when the pains are either defective or totally suspended, it occasionally exerts a very beneficial influence.

It sometimes causes *extreme* suffering. Dewees indeed states that the ergot does not occasion great pain. My experience upon this point is the reverse of this. So distressing did its operation prove in three instances, that in subsequent labours the patients resolutely refused it. Its full action generally arises speedily after its administration, and is manifested, first, by the womb on external examination becoming tense and firm, and secondly, by the supervention of pains at very short intervals. To this however an exception is to be made. The ergot every now and then defeats itself, in consequence of the action induced, though not strong, being without any *perfect* intermission; the frequency of the contractions seem to prevent their attaining that degree of force which is requisite for the expulsion of the child. That the uterine action is really to be attributed to the operation of this medicine, may be inferred from the complete change which occurs in the character of the pains very soon after its first exhibition. Even under regular and strong paroxysms, the patient, in some instances, does not in the interval obtain freedom from pain, probably from the tonic contraction not entirely ceasing. It is observed by Dr. Cusack, in the 5th Vol. of the Dublin Hospital Reports, that in three instances, where it was employed in half drachm doses, substance as well as infusion being administered, symptoms of an apoplectic nature supervened, such as a diminution in the frequency of the pulse, the beats averaging from fifteen to thirty in a minute, stupor, epistaxis, &c. Though the pulse is said to become under its administration rather slower than ordinary, I do not understand that the symytoms referred to by Dr. Cusack have in other instances been found to occur. Professor Burns, under the impression that morphia forms one of its constituent properties, regards the principle of its action as analagous to that of opium: to this, however, an exception may fairly be taken, since opium will directly arrest its action. Moreover it is proved by the analysis of Vauquelin, and by the more recent analysis of Maas, that morphia is not a component part of the ergot of rye." 80.

The experience of Dr. Cusack tends to corroborate the statement of Tissot, who asserts that, in 1596, an epidemic disease prevailed in Hesse, which the physicians attributed to bread made with horned rye. Some of the patients were attacked with *epilepsy*, which was generally fatal; others with insanity, which left them stupid the rest of their lives. The author proceeds to point out the necessity of observing the dimensions of the pelvis and os uteri and the condition of the uterus and parts opposing its action, before the exhibition of the medicine is decided upon. In a first labour he considers it inadmissible, also in a state of plethora, spasm, undue mechanical resistance, excessive uterine sensibility, and when turning is likely to be required, except in cases of hæmorrhage.

" Again, when the placenta is retained either by spasm or morbid adhesion, the ergot will decidedly be improper. It is applicable to states of inertia *only*. To insure its effects as far as possible, it is very material to administer it in a fresh state, and when the stomach is empty. It may be exhibited in the form of tincture, infusion, or powder; or it may be used as a lavement. In the process of decoction, the active property of the ergot in some measure escapes. Milk added to preparations of the ergot is said to prove an antidote to its violent effects; but if the ergot be proper, what necessity is there for an antidote? especially since its action, when too violent, may be immediately controled by opium. Perhaps it might be administered with advantage in placenta presentation, directly before the hand is conveyed into the uterus, in order to induce that efficient and permanent contraction, which is essential to the patient's security. In ordinary turning, a high degree of contraction is a serious obstacle; but as these peculiar cases of delivery are often accompanied by a dangerous depression of the vital energies, a powerful uterine contraction, that shall be exerted immediately the turning is completed, is most earnestly to be desired. I submit this as a mere conjecture, not having as yet formed an experimental acquaintance with the subject. Perhaps in any case of turning, or instrumental delivery, attended with a deficient uterine action, it may be prudent to exhibit the ergot, in order that the system may be influenced, if possible, before the operation is undertaken. The risk, as well as the great difficulty of extracting a child, when unaided by the proper contraction of the organ, (unless the vital powers be exceedingly depressed, and the relaxation universal), can be appreciated by the experienced only." 83.

In proof of the violent effects produced by the ergot in some instances, and of the necessity of observing circumspection in its employment, the author observes—

" I am informed by a surgeon of extensive practice in this neighbourhood, that to his knowledge several instances of ruptured uteri have really occurred under its violent action." 81.

As far as our own experience goes, we find that the action of the uterine fibres produced by this medicine is different to that which is natural: in the former case the fibres are drawn into rigid, irregular, permanent rugæ, accompanied with corresponding pain of the same continued and spasmodic character; in the latter, the action is intermitting, more of an expulsive kind, the uterine tumour less rugous, and the pains alternating with intervals of ease. This peculiar property of exciting in the generality of instances a specific contraction in the walls of the uterus had led to the use of the ergot, with a view of preventing hæmorrhage after the birth of the child. The author's experience does not enable him to speak decidedly in recommendation of its employment with this intention. We are, however, disposed to think more favourably of it in such cases; at the same time we perfectly agree with the following conclusions:

> "As to the practical deductions from the foregoing remarks, I would observe, that additional experience is wanting to confirm the utility of the ergot in uterine hæmorrhage: implicit reliance cannot be placed upon it. At present, therefore, it must in this respect be regarded as of doubtful efficacy. The evidence in its favor, as being calculated to promote uterine contraction under every possible circumstance, though multiplied in extent, establishes no definite principle on which the practitioner may confidently repose. It should be regarded only as an auxiliary, for although it is sometimes efficient in producing the full tonic effect, and thus arresting flooding, it frequently fails, either wholly or partially." 85.

It sometimes happens that no *secretion of milk* takes place after labour. The sympathy existing between the natural and diseased condition of the uterus and breasts induced us to administer, in a case of this kind, an *infusion of rye* on the sixth day after delivery, at which time there was no indication of the lactiferous process commencing. In less than twenty-four hours a copious lacteous secretion followed. Whether this event, which was looked for with great anxiety, was promoted by the rye or not, we must leave the experience of others to determine. It was however a singular and striking circumstance.

The subject of *abortion* is introduced by a scientific explanation of the manner in which the ovum accomplishes its connexion with the uterus. For a particular detail of this process we must refer to the work itself. After reviewing the different theories, which have been advanced, to explain the cause of abortion, the author adverts to the changes which follow conception. Some are of opinion that miscarriage is owing to a deficiency, others to a redundancy of blood, or increased vascular excitement in the maternal system. The author inclines to the latter, and believes that this misfortune is mostly preceded by an increased activity in the circulation, either general or partial. For the treatment of such patients, as are supposed to labour under a defective supply of blood, the cold bath, nutritious diet, gentle exercise, attention to the bowels, and tonics, are recommended. Those, whose abortions are supposed to be occasioned by a generally or partially excited circulation, or to plethora, should submit to the repeated abstraction of moderate quantities of blood during the first four months, beginning just before the termination of the first conception. Care should be taken to avoid syncope. Collateral aid may be afforded by simple spare diet, regular state of the bowels, pure air, perfect rest and cool temperature. The recumbent position should be enforced, as much as possible, and all violent exercise must be avoided. The attachment between the placenta and uterus is so slight in some females, that a ride on horseback, or in a carriage, or a long walk, has been sufficient to lacerate their connexion. When there has existed a tendency to retroversion of the uterus, which generally manifests itself at the same period, when abortion takes place, the author has found opiate suppositories possess singular efficacy. Opium indeed will often prevent the occurrence of premature labour as well as abortion, when administered for the relief of uterine pains, before hæmorrhage has been established. In these cases it will be found advantageous to combine venæsection and long-continued horizontal rest with the opiate. The author also enjoins the rigid observance of *divortium a toro mariti* from the first to the fifth month. Two cases are appended in illustration of the success of this treatment.

It seems to be an instinctive property of the uterus to enlarge in proportion with the growth of the fœtus, and when the latter is deprived of life or ceases to increase, a disposition to expel its contents commences, and sooner or later expulsive efforts follow. This principle is found to operate even in extra-uterine fœtation; and, as soon as the ovum and its contents have arrived at maturity, the symptoms of parturition begin. Hence, when the deadly poison of vicious intercourse has extinguished the spark of embryo-life, the uterus ceases to enlarge, and rejects the blighted offspring. Thus we believe the perfect development of the uterine inmate is sometimes prevented by primitive imperfection in the ovum or in the delicate process of germination. When the uterus has acquired the habit of acting abortively from the fatal influence of the venereal poison on the germ, we have uniformly found this vicious habit removed by a prudent employment of mercury, which we have prescribed during gestation and afterwards. The author, however, advises us to avoid exciting mercurial action, if possible, until after delivery; it might promote the effect it is intended to prevent.

The author next enumerates the symptoms of abortion, and very prudently urges a careful examination of the discharges. The placenta is sometimes expelled with the cyst and fœtus, at others, it is retained several days or weeks. When it has been long retained, there is danger of slight but troublesome prolapsus uteri following, unless the patient is subjected to the recumbent position.

Among the signs denoting the existence of pregnancy the following remarks occur respecting mediate auscultation.

> "On applying the ear to the abdomen of a pregnant woman, with or without the aid of a stethoscope, a whizzing or hissing murmur is distinctly heard, synchronizing with the mother's pulse, and termed the 'placental soufflet' or 'bruit placentaise.' This sound is supposed to depend upon the transmission of blood through the arteries of the uterus at the site of placental attachment, and possibly through the arterial tubes and cells of its maternal portion also; and may be perceived, though somewhat modified, even after the fœtal circulation has ceased. The double pulsation of the fœtal heart, which may also be heard, is an infallible evidence of a fœtus in utero. To this the soufflet must be considered subordinate. But when the fœtus has perished at a very early period of utero-gestation, before the action of the heart can be clearly ascertained, the soufflet alone is available. It is stated that the sound of the fœtal heart has been detected as early as the tenth week; but, antecedent to the fifth month, deception on this point is very likely to arise. To the opinions here advanced respecting the soufflet as a test of pregnancy, an exception has been taken. It is said that the soufflet may be heard even in ordinary enlargements of the uterine vessels, and independently altogether of conception." 101.

After a portion of the placenta has been detached, it is supposed that no reunion ever takes place; and this view coincides with our own observations. When the fœtus has been some time dead, and a necessity for a continuance of the increased determination of blood, previously existing in the uterine circulation, has ceased, the enlargement of the vessels, as well as the orgasm producing it, subsides.

> "Under this state of congestion, the placental vessels are rendered either wholly impervious, or still admit of a very imperfect and diminished circulation; and it has been rationally conjectured, that the blood taken up by anastomosing channels, instead of passing through the arteries of the cellular part of the placenta, is directly conveyed to the uterine veins, and from them conducted back to the maternal system; a supposition which accounts for the occasional absence of hæmorrhage in certain cases where the fœtus has been some time dead, as in such instances the uterine circulation has had time to establish itself." 102.

The length of time, during which a dead fœtus may be retained in utero, is uncertain. The usual period is from one to three weeks. Dr. Blundel says—

> "When the ovum dies in the earlier months, it may be retained till the close of pregnancy."

In support of this assertion Mr. Ingleby adduces several remarkable cases, in one of which we find an ovum was retained three months after its twin had been expelled.

Mental emotions have in all ages been arranged among the causes of abortions, and the author is confident that a severe fright may instantly destroy fœtal existence without the supervention of hæmorrhage, until some time afterwards. The Father of British Midwifery, some of whose notions were very crude, was also convinced of the same fact.

> "Item, aborcement may happen by over-much stirring of the body in labouring, dancing, or leaping, or by some fall or thrust against some wall, or beating, or by some *soduine anger, feare, dread, sorrow,* or *sodaine and unlooked-for joy.*"*

The *morbid condition of the placenta* here attracts the notice of the author. It sometimes assumes a grape-appearance.

> "In form, these bodies are usually oblong, the exterior resembling the decidua uteri, the interior not unlike a bunch of grapes; each eminence being covered with a very thin membrane, and having a dusky red fluid interposed, the fluid in each portion freely communicating. Masses of hydatids, or small vesicles, are often appended both externally and internally. In structure, the lobes vary, being soft, homogeneous, and of a pale red colour, in some; while in others, they appear like coagula enclosed in thin membranous septa. Many of these growths resemble the firmer polypi, or fleshy tubercles, having an imperfect internal membrane. A few of them, except being longer in form, and heavier, differ little from the healthy ovum, having a single cavity only, containing a turbid or bloody fluid. The vestige of a very small fœtus may sometimes be discovered within the ovum, in a rude and undigested shape, attached by a minute filament, its size being in an inverse ratio to that of the placenta. The fœtus must, however, maintain its vitality, though it ceases to grow with the mass which encloses it; and this is the more remarkable, as in one case, which occurred under my observation, the funis was extremely short, and not thicker than a good sized bristle. But, though fœtal or rather embryotic existence may not be extinct, the mass may, to all intents and purposes, be considered a foreign body. The observation made by Leake and Hunter, that a real conception may be dissolved, and pass off in a fluid form, leaving the placenta adhering and increasing in size, accords with experience. Gooch, however, speaks of the ovum being produced without the fœtus. In other abortions of this kind, the mass comes away more consolidated in appearance, and having no definite form. A few of them in shape resemble the cavity in the uterus." 108.

The placenta is sometimes converted almost entirely into a congeries of hydatids, which, like the *volvoces globatores,* are impregnated with smaller ones. We met with a specimen of that kind, expelled at the third month.

After exposing the absurdity of M. Duges and others in attempting to establish any practical or useful distinction between arterial and venous hæmorrhage in the early months of gestation, the author observes that, before the beginning of the fourth month, abortion rarely proves fatal; notwithstanding the quantity of blood discharged is sometimes prodigious and the effects severe. Hence the amount of the flooding is not so much dependant on the existing calibre of the vessels as on the excited or inflammatory condition of the arterial system, evinced by the excess of coagulable lymph in the blood, by thirst, dryness of the skin, and increased activity in the heart and arteries; circumstances which prevail more in the earlier than the latter stages of utero-gestation. It is always desirable to limit the effusion of blood, and to afford every possible chance of safety to the fœtus.

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* The Byrth of Mankinde. By Thomas Raynalde, Physitian. London. To be sold by John Morret, at the 2 Tuns in Little Britaine. Black Letter, pp. 136.—*R.*

"But when, in addition to the hæmorrhage being considerable in quantity, frequent in return, and protracted in duration, general and regular contractions of the womb are excited, and the os internum has undergone a partial dilatation, there can be no chance of the process of gestation being resumed; preventive measures will be useless; and our great object will be to lessen the uterine discharge, and promote the expulsion of the ovum." 110.

The recumbent position, saline aperients, cool temperature, and the absence of stimuli, constitute the chief means requisite on this occasion. To these may be added perhaps, in extreme cases, the local application of cold. The use of poisons, as digitalis and acetate of lead, is justly reprobated by the author as dangerous, and we may add totally inefficacious, in these cases. Besides the fatal effects which may be exercised on the ovum, while the maternal system is labouring with the sedative operation of these medicines; the cerebellum and medulla spinalis of the patient are exposed to the same paralyzing and often permanent lesion by the internal as by the external use of the latter remedy. In this, as in other species of hæmorrhage, the surgeon should not be guided in the application of his resources by the quantity of blood lost, but by the effect produced upon the individual constitution: he should not prescribe for the disease, but for the patient. The collapse, which a delicate person may experience from uterine hæmorrhage at this early period, has been sometimes fatal. The author adduces four cases of this description. To obviate such unpleasant results it is fortunate that we possess, when consulted in proper time, an expedient as powerful as it is simple: we mean the *vaginal plug.*

"This grand agent, though noticed by many of the earliest writers, was not applied at all conformably with the principles of science, until advocated by Leroux. It is evident, however, that the efficacy of the tampon (plug) is far from being duly estimated, even at the present day, notwithstanding all that Dewees, Burns, and other eminent modern practitioners have advanced in its favour. The uterus, from the closeness of its texture, and the small size of its cavity, will resist distention in the early months. But in the latter months, this is not the case; for, as its substance has then become very ductile and yielding, its cavity capacious, and its length greatly increased, accumulation will more readily take place; and since this is the objection which attaches to the plug, it may be asked, up to what period of gestation can it be applied without incurring the risk in question? I should say, certainly up to the beginning, or perhaps the end, of the fourth month. Its advantage, particularly about the third month, is very striking. The vessels will then have acquired a size sufficient to yield a copious effusion, and our other manual resources are at this time very limited. The rupture of the membranes is rarely justifiable before the sixth month. Before the fourth month, this measure is quite out of the question; but even were it otherwise, since all possibility of the continuance of gestation terminates with this operation, which does not necessarily attach to, although it very generally follows, the use of the plug, it is most fortunate that we have so effective an agent within our control. It may be laid down as an axiom, that the hæmorrhage which accompanies an early abortion, ought never to proceed to the direct destruction of life; for, since the uterus cannot be distended by effused blood until the fourth month, and as the tampon will certainly command the hæmorrhage, death from this cause will generally be prevented when the remedy is timely and properly applied. Notwithstanding this, fatal results are every now and then allowed to happen." 112.

"For the purpose of plugging the vagina, a soft sponge soaked in vinegar, solution of alum, or other styptic, is usually selected; but sponge, unless smeared with ointment, or steeped in oil, is not well adapted for the purpose; since, from its porosity, the blood is not completely coagulated, the liquid parts passing through its substance. I give the preference to lint, cotton-wool, or a soft handkerchief. The removal of the plug, of whatever substance composed, is facilitated if oiled before it is used. The T bandage may then be applied.

The plug is peculiarly serviceable in two conditions of the uterus—first, when the hæmorrhage is great, and the os uteri firm and unyielding; and secondly, when the flooding has so far depressed the system as to leave the uterus incapable of acting. The pressure of the plug excites the organ to contract. Fully to obtain its effect, it is material that the vagina be thoroughly filled with the substance we employ. If the plug only occupies the cavity partially, the blood may continue to escape, as I have frequently noticed, and thus defeat our intention. Several small pieces are preferable to a large single piece; the application is easier, the pressure greater, and the coagulation more readily affected. If, as occurred to me in one case, the urethra is so compressed by the plug as to cause obstruction of urine, we can remove the piece last introduced, without at all disturbing either the other pieces or the coagulum formed at the os internum. Under this treatment, the deciduous membrane may possibly not pass off entire, as under its ordinary expulsion, but escape in shreds. The discharge also becomes more offensive, until the whole contents of the uterus are cast off. But the expulsion of the ovum, when entire, is sometimes delayed several days even after the plug is withdrawn; although, under an active contraction, the ovum may be soon expelled, and the uterus recede a little in the pelvis, leaving it resting on the plug. Dr. Dewees authorizes the removal of the plug after twelve or fourteen hours. It should not, in my judgment, be removed under twenty-four hours. Anterior to this period, the constitutional powers will not have sufficiently recovered to bear a subsequent hæmorrhage, should the withdrawal of the plug be followed by it; but, after that time, Nature usually will be adequately recruited to bear a recurrence, (though the bleeding rarely recurs,) until the plug can be replaced. After twenty-four hours, moreover, the coagula surrounding the plug, from confinement, becomes (become) extremely offensive, and on this account requires (require) to be removed. In a case attended with a most alarming exhaustion, in which I employed the plug three weeks after delivery, the hæmorrhage soon recurred on its being withdrawn, and continued several hours, until a large piece of placenta was expelled. Though the uterus was too firmly contracted to admit of a renewed distention, this second hæmorrhage had very nearly proved fatal. When, therefore, the patient's state, at the expiration of twenty-four hours, is such as leads us to fear the consequences of a return of the hæmorrhage, it will be improper to remove the plug under forty-eight hours." 115.

Rupture of the membranes is not recommended before the sixth month. Should hæmorrhage after the fourth, expose the life of the patient to imminent danger, it may be proper to have recourse to the operation. At this immature period it will however be found a difficult affair, except in the hands of those well acquainted with the anatomical structure and axis of the cervix uteri. To such we need not point out the manner in which it may be accomplished. The object in this case being to lessen the volume of the uterus and the diameter of the bleeding vessels, we do not conceive it necessary to dilate the cervix uteri, as the rupture of the membranes, if that measure should be indispensable, may be effected without exposing the patient to such unnecessary pain and delay. We agree, however, with the author, whose sentiments and conduct seem to be influenced in every instance by humanity, that such a step should never be taken, except when maternal life is exposed to imminent danger. Circumstances may arise to render other assistance occasionally proper: as when the placenta has been partly protruded through the os uteri, and hæmorrhage is co-existing. Here a little aid may liberate the mass, and allow the matrix to contract. For this purpose instrumental relief has been advised by accoucheurs, of which the polypus-forceps, recommended by Gooch, is perhaps the most innocent. Having never found it necessary to use any auxiliary in addition to our own fingers or hand, we are of opinion that instrumental help may be generally avoided. The following case points out the advantage, which may be derived from the interference of art on these occasions.

> "I have in my possession an entire ovum, which was brought away after death. In this case, after repeated hæmorrhages, the patient died; and, on opening the body, the ovum was found totally detached from the womb, and just at the point of descending into the vagina. A slight effort would have released it, and most probably have preserved a valuable life. In order to remove the ovum, it may be necessary to pass the entire hand into the vagina." 117.

After abortion and premature labour, the placenta is sometimes detained several days or weeks. This detention is liable to be followed by hæmorrhage, inflammation of the uterus and contiguous viscera, or irritative fever of a formidable nature. This occurrence is generally produced by a partial contraction of the uterine fibres near the cervix. The remedies, which the author proposes, consist of frictions, external pressure, cold, purges and the ergot of rye. He appears to entertain great solicitude about these cases, and relates an example in which delirium, convulsions and death, followed on the seventh day after premature delivery, the placenta being retained.

When the *lochial discharge* continues considerable during many weeks, the author states that injections into the uterine cavity are exceedingly useful. As he has omitted to mention the preparation he prefers for this purpose, we may observe that we have found a composition, consisting of sulphate of zinc and alum, each one drachm, dissolved in a pint of water, possess the greatest efficacy. As an auxiliary, the most important is the recumbent position, which will promote at the same time the proper application of the injection. The author also strongly recommends pills, consisting of sulphate of zinc and opium. In all increased secretions from the mucous membranes (and the inner coat of the uterus belongs to that class), we have seen good effects from the internal use of the former medicine. When combined with a bitter extract or the sulphate of quinine, as circumstances may require, there will be found no occasion to add opium; as we have never observed sickness to follow the exhibition of such a combination. Galls, kino, catechu and other astringents have also been employed in these cases; and certainly most decided benefit has resulted in our practice from kino in union with alum.

The following remark, published by Dr. Lee in the article "Abortion" in the "Cyclopædia of Practical Medicine," is thus criticised by Mr. Ingleby. We will insert the author's critique in his own words.

> "By far the most frequent cause of abortion is in the product of conception itself; viz. in a diseased condition of the fœtus, or its involucra."—*Cyclop. of Pract. Med. p.* 10.

> "The result of my examinations of the ovum cast off in abortion, both in its healthy and diseased state, is the converse of what is here stated. I have found the ovum healthy in all its parts, even in women who have aborted a number of times in succession. If the case were as Dr. Lee represents, mal-formations would cease to be an exception to the ordinary course of Nature, and treatment would rarely be of any avail."—*Ingleby, p.* 120.

The *hæmorrhages* occurring in the last three months of pregnancy the author divides into *accidental* and *unavoidable*. In the former the blood may proceed from the large vessels supplying the placenta, or from the smaller ones nourishing the decidua and connected with the membranes. When the effusion is sudden and copious, it will be found to proceed from a detachment of the placenta; on the contrary, when small in quantity and of a pale and more fluid nature, we may conclude that it arises from the decidua, and is not likely to impair gestation. Partial separation of the placenta may be owing to an excited state of the circulation, produced by stimulating diet or mental emotion; external injury, &c. The author adds also tenacity of the margin of the placenta as, in his opinion, an occasional cause. Manual examination is absolutely necessary in these cases, to ascertain the state of the os uteri and the nature of the presentation. The recumbent position, and the usual means of preventing a return of the flooding should be immediately and carefully pursued; and, should these fail, we must not allow valuable time to be wasted, till the vital powers are exhausted; but should decide at once upon the best active measure, which experience may suggest. Two means have been proposed to answer this purpose: one consists in rupturing the membranes in order to produce immediate uterine contraction; the other in proceeding at once to effect delivery by turning the child. Each plan has its advocates. We quite agree with the author in giving a decided preference to the former; being satisfied from extensive experience that it will be found by far the more successful one. Should such a step fail, which we scarcely believe it would, to arrest the hæmorrhage; especially if pains were taken to promote the discharge of the liquor amnii; we should have no difficulty in completing the entire evacuation of the uterus: as in that case such an atony in its fibrous structure would be found to exist, or would readily admit the ulterior remedy of turning. The author here very properly observes, that should an irrisistible obstacle to this proceeding be discovered in the rigid contraction of the uterus, that very circumstance must render such a measure needless; as a suppression of the hæmorrhage would almost invariably supervene. In the operation of turning, too, there is always some risk of rupturing the uterus, especially when its sides have become attenuated by long pressure or relaxed by repeated parturitions; not to mention the possibility of death taking place during the operation, an event, which has occasionally happened. The state of the os uteri, the constitution of the patient, and the effects of the hæmorrhage ought to be carefully ascertained. When the orifice of the uterus is thick and rigid, when the subject of the case is very delicate and liable to attacks of syncope, and her mind depressed by alarming presentiment of death, and when a state of collapse exists, or is impending, we feel confident that the issue will be more frequently successful by the gentle procedure; and, should the patient survive delivery, there will be much less danger of inflammatory action succeeding in the serous or interstitial membranes. When we have proof of an extensive separation of the placenta, and the state of the patient and os uteri will admit, we may find it expedient to proceed to delivery without delay; but as a general rule of practice, the other course is the more safe and prudent, and possesses the almost universal sanction of experience.

For the reason, which the author has stated before, the *plug*, in this advanced stage of pregnancy is an inappropriate and, in a relaxed condition of the uterus, a dangerous remedy.

In *rupturing the membranes* the author prefers the finger to any artificial contrivance; and, should the discharge of water be obstructed, he approves of the practice of raising the fœtal head. In every case, except one, in which this plan has been adopted to arrest uterine hæmorrhage, he has had the satisfaction of accomplishing his wish, and of witnessing the natural termination of the parturient process, without farther aid from art.

While engaged in our examination of the os uteri, we should be careful, if possible, to ascertain whether the placenta may have formed any connexion with it; as our practice of course must be adapted to that circumstance.

Instances of alarming hæmorrhage may happen, which cannot be restrained by the rupture of the membranes, and which may not admit of delay. In these cases we must proceed, in the most expeditious and prudent manner we can, to evacuate the uterus, with such mechanical assistance as our experience may suggest.

Much difference of opinion has prevailed respecting the dilatability or capacity of the uterus to contain more than its natural contents at any given stage of gestation. The author believes that it does possess this property; and the fact has been established beyond all doubt by the case of *internal uterine hæmorrhage*, published by Mr. J. M. Coley of Bridgnorth, in No. 332 of the Lancet, and by the post mortem examination of a patient of Mr. Saumarez, referred to by Mr. Coley in his remarks on that disease. This elastic property of the uterus seems to increase in proportion as gestation advances. Hence the danger of confiding in the employment of the plug in the last two or three months; since we find that, when the discharge of blood is obstructed by any natural impediment, the hæmorrhage proceeds internally with so much celerity, as speedily to destroy life.

The subject of *internal uterine hæmorrhage* is next explained, in reference to the small appearance of blood externally; and in alluding to that obscure species, in which no external discharge takes place, and which was formerly considered irremediable by art, the author thus proceeds:

"It cannot be denied that sudden deaths, occurring in advanced pregnancy, without any internal issue of blood, correspond not only with detachment of the placenta, but with laceration of the mass also; the blood being thus permitted to accumulate in a considerable quantity. Under the rupture of a central vessel, the placenta has been found so much detached, and forced inwards, from its corresponding uterine surface as to enclose at least two pounds of blood, and as the effusion is bounded by the edges of the mass, which still adheres, it cannot escape into the general uterine cavity." 136.

In illustration of this remark, the author refers to a short Essay on *Internal Uterine Hæmorrhage*, published by Mr. J. M. Coley in the Lancet, No. 332, in which is recorded an alarming case, that terminated successfully by the artificial rupture of the membranes, and the subsequent evacuation of the uterus. In this case the surgeon in attendance, being unable to discover the nature of so singular a disease, requested the opinion of Mr. Coley, who perceiving that the patient was labouring under that peculiar species of hæmorrhage, which he has denominated internal uterine, directed the membranes to be instantly ruptured. This operation was followed by immediate relief, and delivery was effected about two hours afterwards by the natural efforts, assisted by secale cornutum. The lady having been almost in articulo mortis during several hours, before Mr. Coley was consulted, he acted very prudently in taking the course which we have described. In such cases, the skin cold and clammy, and the pulse and senses imperceptible, the least violence, increase of pain or of hæmorrhage, would have proved instantly fatal; and repeated experience has convinced us, that at such a critical moment, manual delivery is almost certainly destructive.

This peculiar variety of hæmorrhage has also been noticed by Burns, Baudeloque, Albinus, Saumarez and Blundel.

Rupture of the placenta sometimes happens. A case is related in the North of England Medical and Surgical Journal, No. 4, p. 446; and a similar accident was noticed by the author in a cat, which had died from internal hæmorrhage. After describing the symptoms denoting internal uterine hæmorrhage, he adds—

"We shall be quite justified in passing the hand in utero (provided it can be done without great violence) and accomplishing delivery." 138.

Before we adopt this course, the state of the os uteri and of the patient should be ascertained. When the former is only partially dilated, thick and rigid, and the patient in danger of expiring every moment from a long-continued collapse; the only course, which can afford her a chance of recovery, will be to adopt Mr. Coley's proceeding of rupturing the membranes, which should be done in the most gentle manner. When the os uteri is found dilated or very thin, and the patient labouring under only the ordinary effects of a common flooding, without any of that characteristic appearance of distress, death-like coldness and clamminess of the skin, and absence of pulse, accompanying alarming collapse, the surgeon may proceed at once to effect manual delivery with great prospect of success. It should be observed that this accidental separation or rupture of the placenta is liable to happen, unconnected with the process of parturition; when the plan of rupturing the membranes will possess still greater advantages to recommend it.

The *unavoidable hæmorrhage* is that, which proceeds from a separation of the placenta, after it has been attached to the inferior part of the uterus. *When* flooding arises from this cause, it must necessarily increase with the dilatation of the cervix and os uteri, which commences about the fifth month. The author states that it has been witnessed as early as the third, but it is seldom met with, until some period after the fifth month. These hæmorrhages, if left to Nature, would, with a few exceptions, be fatal. The placenta and fœtus have been expelled together, and the former first and the latter afterwards with safety. These however are rare occurrences. The placenta may be adherent wholly or partially over the uterine orifice. The exact nature of the case should be ascertained by careful examination. After attempting relief by decubitus on a hair-mattress, by cool regimen, saline aperients, injections, and the application of cold; should the discharge continue to increase, or return so suddenly and frequently as to produce alarming effects, the author recommends delivery to be effected with the following precautions, which we are glad to find correspond with those we gave, when speaking of internal uterine hæmorrhage.

> "A forcible entrance into the uterus, whilst its orifice is rigid, is never to be justified."
>
> "If the os internum be tolerably soft, and dilated to the size of half-a-crown, or, what is of far more importance, soft, thin, and dilatable, sufficient to admit the finger easily, the operation may be attempted. On gently passing the ends of the fingers in succession, and in a conical form, we quickly ascertain the degree of resistance. By pausing a little, if needful, relaxation may follow; if not, the hand must be withdrawn, and the attempt renewed at the proper time." 146.

As soon as the requisite relaxation of the os uteri has taken place, we should proceed to deliver, as any unnecessary delay might be dangerous or fatal. The author's ample experience and that of his friends have established the decided advantage of early delivery in these cases; and the welfare of the infant and parent is alike dependant on the promptitude and skill of the accoucheur. The author here exhorts us to practice great perseverance in our efforts to restore suspended animation in the child after birth; and adds that he succeeded in one instance after 50, and in another 55 minutes had elapsed.

When delivery cannot be safely attempted, either on account of extreme collapse or an unfavourable condition of the os uteri, the use of the plug may occur. The author states forcible objections to it in the state last mentioned, particularly the impossibility of following every fresh laceration of the placenta with such a remedy. Being desirous of obtaining the sentiments of eminent accoucheurs on this subject, he has been favoured with those of Sir C. M. Clarke and Dr. Blundel, with which we will present our readers.

"Dr. Clarke, who does not seem to be apprehensive of its occasioning an internal hæmorrhage, is, notwithstanding, opposed to the principle of using the plug when any thing remains in the uterus to be brought away; he regards the practice as in itself unscientific, a half and uncertain measure, when decision and action are indispensable, and would seek to procure contraction by the only certain means. This eminent man, who always delivers as early as possible, never lost a patient in this presentation. Dr. Blundel, on the other hand, averse, as he has often declared himself to be, to officious midwifery, would not hesitate to plug either in general or partial placental presentation, 'provided (as he observes) the os uteri were rigid, and the gushing or draining seemed to require the remedy,' doubtless from the impression the loss shall have made on the system.

" Repeated deaths from placentar presentation prove that the unaided powers cannot be depended upon in all cases, whilst we are waiting for relaxation." 152.

When dangerous exhaustion exists, the author does not hesitate to pronounce the plug a valuable auxiliary till such reaction takes place, as may afford hope of success from the employment of more decided measures.

" Whilst flooding continues, the practitioner has but one duty to perform, viz. to deliver; but, when coldness of the skin, a pulse scarcely perceptible, (associated perhaps with vomiting,) and a countenance denoting excessive exhaustion, supervene upon an hæmorrhage that has temporarily ceased, a mere draining going on, such a moment is ill adapted for turning the child. There is an axiom in midwifery, that no woman should be suffered to die undelivered. I assent to this as a general rule; at the same time, its rigid enforcement during a state of collapse fairly admits of question—the mere bodily disturbance has too often proved fatal." 153.

Such a state as this is, he thinks, peculiarly adapted for transfusion.

" Rather than deliver under collapse, we ought to occupy ourselves in administering stimuli and cordials, promoting animal heat, perhaps performing transfusion, carefully watching the effects of reaction, and holding ourselves in readiness to deliver on the recurrence of bleeding, or, if the tampon be employed, as early as the patient's strength will allow." 153.

The authority of Dr. Blundel is again brought forward in recommendation of plugging in this exhausted condition; and in farther proof of its good effects, a case is appended, that came under the care of Mr. Grainger of Birmingham, who, finding his patient moribund, applied the plug, and waited two days, before he ventured on delivery.

The rupture of the membranes, when a considerable part of the placenta is fixed on the os uteri, is inadmissible near the full period of gestation. Any time before the fifth month it may be had recourse to, as at that early period the hand cannot be urged into the uterus, without using improper force. When it is found necessary to introduce the hand in the advanced stages, for the purpose of turning, the author prefers passing it between the placenta and uterus, rather than through the substance of the former, as has been recommended by some writers; but, when imminent danger to the mother is at hand, the placenta should be pierced without delay. The state of the patient and of the hæmorrhage should determine the propriety of expediting the extraction of the child and placenta, after the feet have been brought down.

The consequences of large and repeated losses of blood, especially when accompanied with temporary suspension of the functions of the heart and brain, are often most severe and distressing; and, after harassing the patient during several months or years, they sometimes terminate in organic disease in one of these important organs, particularly the former. After collapse of long continuance, reaction sooner or later succeeds, and is often associated with sub-acute inflammation of a most tedious or indomitable character. Various derangements of tiresome duration in the organs of sense, particularly that of hearing, follow; and, should the patient finally recover, she remains long unfit for any active duties. All stimuli should be abstracted, as soon as re-action begins; and this should be modified by suitable means, care being taken in the employment of aperients not to induce a diarrhœa, which may speedily prove fatal. With the author's remarks we will close this part of the subject.

"When the gushing or draining has continued a considerable period, the stomach being unable to supply sufficient nourishment to counteract the exhaustion, the evils peculiar to large losses of blood frequently ensue. Death has sometimes occurred at a comparatively remote period after delivery; in some instances, under an impaired state of the system generally, accompanied with dropsical accumulations; in others, from organic changes, in the heart and brain especially, the consequence of previous loss of blood." 162.

Hæmorrhage occurring during labour generally arises from a detachment of the placenta. The author seems inclined to believe this separation may be attributed to the use of ergot of rye. When interference is necessary, delivery must be hastened in the most practicable manner, either by turning or the forceps.

With respect to *flooding connected with plurality of children*, and which is generally occasioned by a busy interference, the author finds the most successful practice is to leave the expulsion of the second or third child to the natural efforts, which he has observed usually commence about six or eight hours after the birth of the first. By observing this rule he has been uniformly successful, and his patients have escaped hæmorrhage. Those, who advocate the plan of rupturing the membranes and delivering the second child within a given time, will find themselves frequently perplexed with an hour-glass, or other partial contraction of the uterus and most alarming hæmorrhage. To this mal-practice the intelligent author ascribes some of the most serious fluxes of blood, which he has witnessed. Were he disposed to fix a precise time, as a safe interval to elapse between the birth of the first child and the re-commencement of uterine action, he asserts that twelve hours would by no means be too long. In 85 cases occurring at the Birmingham Dispensary in ten years, the pains were not renewed on an average in less than twelve hours, excepting those cases, in which the second speedily followed the first birth. In a few instances, 24 to 30 hours elapsed. In the absence of pain the horizontal position, perfect rest and tranquillity should be enjoyed; and, when the patient has recovered, frictions, a firm bandage and the ergot of rye may be employed, and the os uteri stimulated with the fingers. Should some slight action commence, the delivery may then be facilitated by rupturing the membranes. The presenting part should be discovered at the same time, and the child turned, or the rest of the process left to Nature, as circumstances may require. Should hæmorrhage arise between the expulsion of the first and second child, delay will be unjustifiable.

The rules for the *management of the placenta* have been subject to great extremes. Dr. Hunter's practice of leaving the affair altogether to Nature, was found to be productive of most unfortunate results; and the author mentions a case of recent occurrence in genteel life, which terminated fatally in consequence of the placenta being allowed to remain in the uterus, until the fourth day. On the other hand a hasty or premature extraction of the secundines is liable to produce laceration of them, or prolapsus or inversion of the uterus, and will almost to a certainty occasion most alarming hæmorrhage. Two cases of inversion from this cause have come under the author's notice. One of them was succeeded by fatal hæmorrhage in three hours, and the other was irremediable, the patient being still alive.

When violent flooding takes place, no time must be lost in passing the hand into the uterus, grasping the placenta and exciting the former to contract, so that the hand and its contents may be expelled together. In the absence of flooding the author agrees with Dr. Joseph Clarke, that two hours should be allowed to elapse after the birth of the child before any attempts should be made to remove the after-birth. To effect this, particular directions are given to meet every exigency. In twin-cases a longer interval than two hours should be permitted. *Retention of the placenta*, according to the author's experience, may arise from torpor, or irregular spasmodic action of the uterus, or from morbid adhesion. It is generally provoked by impatience or unskilfulness on the part of the accoucheur. We sometimes find a quantity of blood confined in the uterus by coagula, or by the placenta lying loose at the orifice. The latter obstruction should be removed without delay; and when there is absolute want of uterine contraction, and the placenta is partly adherent, we are directed by the author to apply frictions over the abdomen in the region of the fundus uteri, and cold to the hypogastrium, and to administer ergot of rye; and, should these fail, to pass the hand into the uterus and to inject cold water into its cavity. When the constitutional exhaustion is extreme, and only a small part of the placenta is detached, the author says that the bleeding spot may be discovered and compressed with the hand in the uterus, until the circulation is restored and contraction begins; when the hand and placenta will be expelled together. This mode of suppressing uterine hæmorrhage was, we believe, first published by Dr. Gooch. His plan consisted in introducing the left hand, closed, within the uterus and applying the right, expanded, to the outside of the abdomen; and between the hands he compressed the bleeding vessels.

The spasmodic retention is denoted in extreme cases by a hardness in one part of the uterus of various size and shape, felt externally, while the other portions continue relaxed. It is generally attended with pain, and, when affecting the middle of the organ only, is called from its figure the hour-glass contraction. Some futile attempts have lately been made to disprove the existence of this species of constriction. Any one, who, in attempting to introduce his hand for the purpose of reaching the incarcerated placenta, has really felt this powerful, spasmodic stricture in the uterine fibres, could not possibly be mistaken. We have indeed met with it nearly at the fundus, certainly above the middle, especially in those cases, in which a part of the placenta has been strangled by the contraction. In support of this decided conviction of ours we are happy in being able to add the author's unshaken and respectable opinion.

"To the young practitioner, I allow, deception on this point is not unlikely to arise; for the inferior part of the uterus, being in a flaccid and dilated state, appears to be in direct continuity with the vaginal canal." 193:

Five cases are introduced, which prove satisfactorily the nature and existence of the disease. The fourth is so interesting and instructive, particularly in pointing out the absolute necessity of removing the obstruction by manual aid, that we cannot resist presenting it to our readers in the author's words.

"I was called twenty-six hours after the birth of the child to a woman with retained placenta, the funis having been disrupted at its point of insertion. The os uteri flaccid, and nearly the circumference of a dollar in size, could be as plainly discovered by the finger, as in the first stage of labour, and a portion of placenta was felt detached immediately above it. Although I succeeded in passing the os internum, it firmly embraced my hand. The detached portion of the placenta could be traced through a firm stricture in the centre of the organ, which with difficulty permitted my fore-finger to enter, and above which the placenta was firmly adherent. The day previous to this, the practitioner in attendance had made several attempts to pass the stricture. This gentleman assured me that no part of the placenta could at that time be felt, the stricture closely encircling the funis, which then gave way. When I saw the patient the following day, the spasm must therefore have become sufficiently relaxed to allow a piece of placenta to pass by it, which it embraced very firmly. Opium and castor-oil had been largely employed. The extreme turbulence of the patient compelled me to desist; she declared she would rather die than submit to the dilatation of the stricture. I was again called to the patient five days afterwards. She had bearing-down pains truly distressing, and as forcible as though the child was passing the os internum—the breathing was laborious, the pulse rapid, the fœtor intolerable, the danger extreme. The hand was again passed through the os uteri, but not through the second stricture, but a large portion of the placenta was now withdrawn through it. Death occurred on the thirteenth day. On examining post mostem, the body was uniformly healthy; a piece of placenta, about the size of a small egg, was attached to the fundus very firmly, and could not be separated either by the finger or maceration." 197.

In whatever part of the uterus the contraction may exist, it is our duty to remove it by a gradual dilatation with the hand, which, having grasped the imprisoned placenta and excited the fundus into action, should be entirely withdrawn. As an auxiliary, the author mentions opium among other remedies. When the pain is extremely violent and the spasm unusually obstinate, temporary benefit may probably be derived from it. Having however invariably found the pain to subside, as soon as the manual operation has been concluded, we have had no need of its assistance.

The *adherence of the placenta*, which may be general or partial, is a most serious circumstance. As soon as it has been ascertained, the author directs the hand to be introduced into the uterus, and the inner surface of the latter to be stimulated by moving and gently pressing the knuckles against it. Should great depression and hæmorrhage attend, the latter must be arrested with the two hands in the manner before described, until the vital powers are renovated. Then the surgeon must proceed to peel off the placenta, beginning at any point of its edge most easy of access. Having succeeded in entirely separating the adherent surfaces, the placenta must be held fast in the hand, until uterine contraction has been elicited and all the extraneous contents of the matrix expelled.

A partial adhesion of the placenta, alluded to by Dr. Ramsbotham, having a loose portion hanging over the os uteri or in the vagina, has often occurred in the author's practice. In attempting to remove the detached part, the placenta may be torn and the adherent portion left behind, to the imminent danger of the patient. When common expedients fail, the hand must be introduced. On the unguarded directions of Dr. Gooch, who recommends the placenta to be pulled with considerable force, the author comments with just severity, and subjoins a fatal case confirming the propriety of his censure. Whenever a part of the placenta is left adhering to the uterus, it should be removed immediately after delivery: for should this proceeding be delayed only a few hours, it will be found very difficult or hazardous to attempt the introduction of the hand for that purpose. The mass left behind is usually discharged afterwards in a state of decomposition. The period, when this may take place, is very indefinite: it generally happens in the course of four or five days. In one case the author states, that the adherent portion was not cast off in less than 21 days; and Ramsbotham relates another, after a premature labour, in which at the end of a month it was expelled in a healthy state, having undergone no apparent alteration. It has been supposed by Dr. Neagle that sometimes absorption of the dead mass takes place; and a friend of the author informed him that half of the placenta, in an instance under his own observation, being detained, was never afterwards found to pass away. The author mentions another result of disruption of the afterbirth, which, he believes, has not attracted the distinct notice of others. This peculiarity consists in such an intimate connexion between one circumscribed portion of the placenta and uterus, as does not admit any obvious line of demarcation between them. Hence he says—

"Instead of the retained portion being cast off by the progressive contractions of the womb, the connexion may be sufficiently close to resist these efforts of Nature; the organ remaining bulky, and the vessels, supplying the extraneous body, unusually large. If the hæmorrhage is inconsiderable, and the constitutional energies unimpaired, the mass, by acquiring an increased degree of organization, presents a florid hue, not unlike a fungus (fungous) growth, in place of the black and offensive structure which characterizes a disrupted state of the placenta. Moreover, the retained portion may become so far identified with the lining membrane of the uterus as to render a distinct and perfect disunion impracticable. Unless the mass be completely walled in, vessels will be exposed; and though decomposition may not take place, hæmorrhage will necessarily arise; and as the uterus cannot be perfectly contracted, the cessation of the hæmorrhage must entirely depend upon the formation of coagula within the vessels. On the clots being displaced, the effusion will be renewed from time to time; but so far from occurring immediately after delivery, several days may elapse before it appears. The dissections of women who have perished from hæmorrhages at different periods after delivery, fully establish my assertions. In one instance of this kind, hæmorrhage began on the third day after delivery, and, with the exception of a few short intermissions, continued during a period of five weeks, when it terminated in death. On inspecting the body, a tumour of rather florid colour and the size of the largest walnut, was found firmly adherent to the sides of the fundus uteri at its highest part; the lining membrane covered the greater portion of the mass, though not its centre, which was ragged, and vessels could be traced opening upon it." 210.

The consequences of retained portions of the placenta are often an hæmorrhage, irritative fever and inflammation, and suppuration of the uterine lymphatics and veins. The hæmorrhage is occasioned by repeated exposure of the blood-vessels and may terminate fatally. To obviate this result, we should, if possible, remove any adherent portions within reach of the fingers. The author very properly questions the propriety of using the plug in this case, as, the hæmorrhage being generally attended with a putrid discharge, it might endanger the life of the patient to confine the latter within the uterus. Should the flooding consist purely of blood, and the uterus be sufficiently contracted, there could exist no doubt about the safety of the practice.

In irritative fever, arising from detained placenta in a state of decomposition, the following state more or less prevails.

"The sensorium is early affected, as denoted by pain in the head and wandering of mind—an anxious, pallid, or sallow countenance, vomiting, rigors, thirst, heat and dryness of skin, great rapidity and feebleness of pulse, flaccidity of the breasts (for milk is rarely secreted), tremors, which, when the uterine pain is severe, pass into violent convulsions, and sometimes augmented sensibility over the hypogastrium. The bowels are at the onset confined, but diarrhœa frequently prevails in the course of the complaint. As the disease advances, there is delirium or stupor, slight but uninterrupted convulsions of one or both arms, and sometimes the face, a dry and brown tongue, lips and teeth covered with sordes, a puffy and tumefied state of the abdomen, fluttering of the pulse, and involuntary evacuations." 213.

Irritative fever, when fatal, generally terminates from the eighth to the twelfth day; sometimes life is protracted till the third week. In almost all his cases the author has observed—

"No disease or vestige of inflammation on dissection; on the contrary the body seemed drained of its blood. The state of the system differs little, except in aggravation and the presence of a putrifying mass, from that described by Dr. M. Hall, in his Researches, as the result of losses of blood; and the necessity of a stimulating practice here is now universally admitted." 221.

To dilute the morbific property of the putrid contents of the uterus, from the absorption of which it is supposed that this species of fever arises, the author proposes the injection of tepid infusion of chamomile with liq. calcis vel sodæ oxymurias; and, after the offensive odour has subsided, he recommends cold solutions of alum to be thrown into the uterus, by introducing the point of the injecting instrument within the os uteri. An elastic gum-bottle, or the improved vagina-syringe will answer the purpose. The linen should be often changed, and the apartment ventilated. The constitutional treatment at first may consist of mild, saline aperients, followed by the citrate of potash; and symptoms may require sulphate of quinine, subcarbonate of ammonia, aromatics, &c. To allay restlessness the author advises acetate of morphia, and solid opium to relieve vomiting or purging. A liniment, composed of ol. terebinth. and lin. sap. c. is much extolled by him, as an external application to the uterine region.

Inflammation from detained placenta happens mostly on the second or third day after delivery. The author asserts that the lymphatic has appeared to him more immediately affected than the venous system. In one case, though attended with phlegmasia dolens, no inflammation in the veins was discovered. The symptoms denoting inflammation in the lymphatics and veins of the uterus have unfortunately been omitted by the author. Notwithstanding he might have considered it a digression from the subject of hæmorrhage, it would have rendered this portion of his treatise more complete and valuable, on account of the extensive opportunities, which he must have enjoyed for accumulating practical information on the disease. In speaking of the treatment of this species of inflammation, he observes that general bleeding is rarely admissible.

> "Should there be much pain in the back, eight or ten ounces of blood may be abstracted by cupping the loins; otherwise the application of leeches both within the vulva and over the hypogastrium, is much to be referred. The abdomen may be fomented, and a large and soft linseed poultice, (if its weight can be borne), afterwards applied. Relief will also be obtained by injecting into the uterus a decoction of poppy heads, or a weak solution of the extract of belladonna in water. The French practitioners have eulogized the action of mercury in inflammation affecting the uterine structures. I have seen its full specific effects obtained within a short time, without any relief to the symptoms." 217.

Nine fatal cases, interspersed with remarks, and some necrotomical observations conclude this part of the work.

The author, having described the different states, in which the uterus may be found after delivery, proceeds to notice the *hæmorrhage with a firm contraction of the uterus*, first pointed out by the late Dr. Gooch, and attributed to an extraordinary force and frequency of circulation, which does not permit the orifices of the vessels to contract. The absurd explanation of this singular species of hæmorrhage, attempted by a Mr. Roberton, is ably exposed by the author, who has annexed the following case to his remarks.

> "I had an opportunity of noticing this species of hæmorrhage in the person of a young lady of naturally spare habit of body. During her first pregnancy, she attained a degree of corpulency and robust health very remarkable, when it is considered that from the activity of the absorbent system attenuation is for some months a characteristic symptom of gestation. After the disengagement of the placenta, although the uterus was reduced to as small and tonic a state of contraction as it ever attains at this period, the hæmorrhage was for some time exceedingly profuse, and was not restrained by pressure. The pulse was unusually strong and full when the hæmorrhage commenced. In a case like this, the institution of physical treatment would be highly proper, particularly towards the close of gestation; but during labour the hæmorrhagic tendency is to be subdued by observing a low temperature, cooling diet, perfect repose, and venesection if needful. This form of hæmorrhage occurred in the practice of Mr.

Porter, of this place, after the delivery of twins. When the hæmorrhage commenced, the pulse was full and strong, and the uterus in a state of high tonic contraction. Within two hours the vital energies became so dangerously depressed, as to lead us to contemplate transfusion. The patient was talking most incoherently, the pulse was apparently absent in the left arm for nearly two hours, and was barely perceptible even after the circulation in the right arm had been materially restored. The uterus nevertheless remained in a state of firm contraction. Dr. Gooch advises the left hand to be introduced into the uterus *closed*, and the right to be applied open on the outside of the abdomen, so as to compress between the two the bleeding surface." 229.

That variety of *internal or concealed uterine hæmorrhage*, which occurs after the expulsion or extraction of the placenta, generally takes place within the first hour.

"The patient becomes pale, complains of being very faint, feels sick, perhaps vomits,—the heart beats feebly and rapidly,—the exhaustion progressively increases. The practitioner no longer finds the contracted uterus in hypogastrio; the abdomen is occupied by a soft and large tumour, occasioned by the uterus being distended with blood. There is little or no external discharge, the napkin being scarcely soiled, and the os uteri will be found more or less plugged up with a coagulum." 232.

To these symptoms death very often rapidly succeeds. The author here enumerates the severe impressions made upon the brain, the heart, the stomach, the lungs, and capillary circulation, by the sudden extravasation of the vital fluid within the uterine cavity; and adds some interesting observations, deserving the most serious attention, and evincing the importance of ascertaining the nature and extent of the *effects* resulting from the sanguineous effusion in every individual constitution, together with the influence previously excited upon it by moral and physical agencies.

The plan of treatment suggested by the author consists in the exhibition of the ergot of rye, and, when exhaustion is extreme, of opium; frictions and manipulations on the region of the uterus, with the view of provoking its contraction; the application of cold air; and the elevation of the hips, the head being at the same time depressed. When the blood, contained in the uterus, is chiefly liquid, it may be forced out by external pressure, which will be followed by speedy contraction. Coagula however of enormous size often form, which cannot be dismissed by such an easy process. In this case, when alarming symptoms exist, we have repeatedly adopted with complete success the plan pursued by the author, which is the only effectual proceeding in such an emergency, namely the introduction of the hand into the uterus. Objections have been started to this measure from an imaginary fear of rupturing the relaxed and extended organ. In a long note on this subject, the author satisfactorily proves, from a comparative examination of numerous cases, that rupture commonly happens during a forcible contraction, and seldom during a collapsed condition of the uterus. In addition to the recommendation and experience of the author, we may state that this practice has received the sanction of the most respectable writers and practitioners of the present day. In the introduction of the hand great care is required, and, while danger is imminent, in addition to the pressure with the two hands over the placental region, as practised by Dr. Gooch, Mr. Ingleby proposes the compression of the large abdominal vessels at the same time. He places no confidence in the introduction of mineral or vegetable acids, and considers all similar remedies, when compared with the hand, as trifling and unsafe, excepting the injection of cold water, which he confesses he has observed to produce contraction, when the hand has failed in consequence of the bulky and flaccid state of the uterus. With respect to the plug in these cases, he considers it inadmissible in less than a few days after delivery, at which time he supposes the uterus may have lost its disposition or capacity for distention. This rule may be liable to a few exceptions, which none but the most scientific and experienced can discriminate. The only safe circumstances, under which plugging can be resorted to, are a comparatively contracted state of the uterus; the lapse of some hours after delivery; the hæmorrhage being dangerous; and the surgeon in constant attendance. At the same time it should be observed that death may take place from hæmorrhage at the distance of a fortnight after delivery.

Another resource in this emergency remains to be noticed, *i. e.* that of interrupting the current of blood through the abdominal aorta, first proposed by Plouquet. Experience, as far as it has extended, appears to confirm the good opinion originally entertained of this valuable remedy. There are two modes by which this object has been attained: one by the application of pressure externally on the abdominal parietes above the uterus; the other by introducing the hand within that organ and compressing the vessel through it. The first species of pressure, it is obvious, can only be adopted, when the patient is of spare habit of body; the other is applicable in persons of any dimensions. It is only with the former proceeding that the author has had any experience. This however is highly satisfactory, as will be seen from the following cases, in one of which this mode of treatment was adopted under his own immediate inspection. The first occurred in the practice of Mr. Blount, a respectable and experienced surgeon in Birmingham; the second in that of the same gentleman in conjunction with the author.

"On the termination of a labour Mrs. W. was to all appearance comfortable. In about half an hour she complained of being very faint; her countenance was very pale, and anxious. There had been little or no external hæmorrhage, and on placing my hand over the abdomen I could not distinguish any thing resembling the uterus. By friction and compression some discharge was forced away, but no beneficial effect resulted; the hand was therefore passed into the uterus, and a mass of coagula which distended its cavity cleared away. By this means, and by gently irritating its inner surface, contraction was promptly effected. Though the discharge had now considerably abated, the exhaustion was very great, the pulse being exceedingly feeble and frequent, and the patient appearing sinking. I now placed my hand on the abdomen just above the uterus, and, from the spareness of habit, easily distinguished the pulsation of the aorta, and made pressure so as to interrupt its current of blood. This was continued with increasing advantage for half an hour, and as the patient was much revived, I then withdrew my hand. Upon the withdrawal of the hand the sinking immediately returned, attended with giddiness in the head and a slight return of the hæmorrhage. Pressure was again made for the space of two hours with the same good effects. Twice during this period I allowed the blood to pass the lower extremities, but with the same unfavourable results as before. A modified and less effective pressure was continued for four hours longer, before it could be entirely dispensed with." 250.

"I recently assisted Mr. Blount in the treatment of a case resembling the foregoing. Whilst pressure was exerted over the aorta, the uterine contractions were provoked by two fingers passed through the os uteri. Whenever the pressure over the vessel was withdrawn, there was an almost instantaneous return of hæmorrhage and syncope, and some hours elapsed before the patient's safety was secure." 250.

Compression of the aorta by the hand introduced within the uterus is an operation, which seems to be principally adapted for a short period after delivery, while the os uteri remains sufficiently patent to admit the hand without violence.

it has been had recourse to with success by Mr. James of Westbromwich,[*] and three times by Dr. Eichelberger.[†]

The application of pressure by means of a large, circular plate, proposed by Mr. Mills, next attracts the notice of the author, who apprehends it will disappoint the expectations of its inventor. When external pressure is requisite, we have always found the hands the very best means for effecting it; being possessed of sensation, they afford us a knowledge of the state of the uterine fibres, and admit of being adapted so as almost to surround the organ, which we wish to compress; while they enable us to accommodate the degree and direction of the force, as the varying circumstances may demand. On the contrary, while the surgeon is flattering himself that his mechanical force is proceeding in due order, he may unexpectedly find that, its operation being limited to one point, namely in a direction towards the spine, the uterus may be forced out laterally by an insidious but fatal torrent.

The author here directs our attention again to the awful responsibility we should feel in the treatment of these appalling hæmorrhages, and urges us to the patient application of every possible expedient to resuscitate the suspended circulation and excitability. Here the least manual violence would be death. Instead therefore of disturbing the conservative process of coagulation, when the least unnecessary commotion may lacerate the thread of life, he recommends our attention to be occupied in directing the administration of external stimuli, and aiding their operation by diligent perseverance, and by inspiring hopes in the desponding assistants. In these perilous cases, the absence of pulse may continue ten or twelve hours, before re-action begins; and, when recovery appears to be proceeding, we must be careful to exercise the greatest circumspection both with respect to treatment and prognosis. The energy of the heart may not be restored by its temporary slumber; it may answer for a while to the spur of medicine, or be urged forward by labouring instinct; it may revive and flutter and then be still, perhaps for ever! While the power of deglutition continues, one of the most safe and potent stimuli is the subcarbonate of ammonia.

At distant periods after delivery, the author is disposed to recommend small doses of acetate of lead. Fully sensible of the nature of the ulterior effects of this dangerous medicine in some constitutions, he accompanies his directions for its use with very prudent cautions.

After severe hæmorrhages of this kind the recumbent position should be extended much beyond the period allowed on ordinary occasions. This measure may be assisted by gentle tonics and by astringent injections. The author extols the sulphate of zinc as an internal medicine in combination with opium—one or two grains of the former with a quarter or half a grain of the latter. Should opium be objectionable, ten grains of any bitter extract, as we have noticed before, will answer the same purpose. The injections may be composed of alum and sulphate of zinc. In addition to the invigorating remedies some prudent directions follow respecting the choice and exhibition of restorative diet. In one case the author found it necessary to administer food by means of the stomach-pump. A much more simple contrivance for this purpose consists of an elastic tube and bottle. To these directions succeed seven cases of uterine hæmorrhage, possessing considerable interest, which we regret our limits will not permit us to transcribe. The last, in which the operation of transfusion was performed, reflects infinite credit on the skill and promptitude of the author and of Mr. Wood, the celebrated operating and consulting surgeon at Birmingham. For the detail of this as well as the other cases, we must refer our readers to the work itself,

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[*] Lancet, No. 235.

[†] Siebold's Journ. Geburtshuelfe, 1829.

That condition of the sanguiferous system, in which a deficiency of fibrin and red globules has been induced, is next described, under the title *anæmia*, which signifies simply want of blood. This state, so familiarly known by the profession, and by accoucheurs in particular, need not here be particularized. The treatment, both medical and dietetical, pointed out by the author, is highly judicious.

The work concludes with some remarks on *transfusion of blood*. The manner of performing the operation is extracted at length from Mr. Waller's Elements of Midwifery, to which we beg to refer our readers, having left ourselves no space for further extracts. The author, whose good opinion of the operation, as stated before, has been derived from personal observation, thinks that every practitioner of midwifery should be in possession of the transfusion-syringe.

The length, to which we have extended our analysis of the present article, leaves but little space for general observations. As a specimen of zeal, industry and erudition, is is highly creditable to the provincial school of which the able author is one of the professors. To all those engaged in the study and practice of midwifery we can recommend the work as the only complete and comprehensive book on the extensive and important subject of uterine hæmorrhage; and every student and practitioner, who is ambitious to attain and display a masterly knowledge of this department, should not only peruse Mr. Ingleby's Treatise with attention, but deposit it on his shelf as an indispensable work of reference.

V.

ABRÉGÉ PRATIQUE DES MALADIES DE LA PEAU, D'APRES LES AUTEURS LES PLUS ESTIMÉS, ET SURTOUT D'APRES DES DOCUMENS PUISÉS DANS LES LEÇONS CLINIQUES DE M. le Docteur *Biett*. Par *A. Cazenave* et *B. E. Schedel*, Docteurs en Medecin. A Paris, 1828.

[Continued from Page 407, Vol. XVI. (April, 1832.]

MACULÆ.

THIS order comprehends those changes in the colour of the skin depending on an alteration in its pigment. They are seated in the rete mucosum, and are divided into those characterized by an increase of colour, and by a deficiency. The former are either general or partial. The bronze tint of the skin, is the only example of general discolouration. It has particularly been observed to follow the internal use of nitrate of silver, but cases have occurred whose origin could not be traced to the employment of this medicine; in these the colour is less deep, and the skin is of a dirty rather than a bronze hue. The discolouration arising from the long-continued use of nitrate of silver is at first blueish, this gradually turns to a light bronze, which is most visible on those parts exposed to the sun's rays, and where the skin is thin, as the face and hands. The whole surface of the body is discoloured at the same time; gradually the tint becomes deeper, until in some cases it is almost black. The conjunctivæ are generally of a livid coppery colour, as well as the mucous membrane of the mouth, where it is exposed to the light, at its junction with the skin. It is remarkable that the bronze colour of the face becomes darker under the influences of those causes which generally produce paleness, and lighter when the individual is exposed to any cause which under ordinary circumstances would render the face red. This discolouration is probably permanent; M. Biett has seen, in Geneva, two individuals in whom it has remained more than twenty years with the same degree of intensity, and during the last fourteen years, which time he has used nitrate of silver in his own practice, he has observed the same thing in several cases. In some the colour has slightly diminished, but hitherto no instance has been known in which it has completely disappeared. It is not attended with any general symptoms, or disturbance in the economy. The nails are usually blueish, but the hair is not changed at all in colour. Generally the cicatrices which existed previously to the discolouration participate in the bronze hue, but M. Biett has observed that those which have formed subsequently remain white, particularly if the wound was deep. Foucroy was the first who attracted attention to this important change in the colour of the skin. Subsequently cases have been recorded by Powell, Marcet, and Roget in England, by Albers, Reimar, and Schleiden in Germany, and by Butini, Delarive and Odier in Switzerland; M. Biett has seen in Paris 22 cases, 7 of which were females, 15 men. The influence of nitrate of silver on the secretion of pigment has not yet been satisfactorily explained. No treatment appears to produce any effect on this discolouration; M. Biett has recommended to two patients whom he has attended nearly fourteen years, salt water baths, as well as baths containing alkalis or the various salts of iron, but without obtaining the least change. He has applied blisters to the hands without effect. Probably reiterated blistering might diminish considerably the dark bronze hue, particularly if the blisters were constantly renewed on the denuded surface, but the difficulty of applying such a remedy to the various elevations and depressions of the face would be insurmountable, and the piebald appearance of the disfigurement but partially remedied, would be more disagreeable than the uniformly unnatural tint.

Lentigo (Ephelide lentiforme. Alibert), Freckles. This is characterized by small rounded yellowish spots, scattered irregularly, sometimes uniting, particularly about the nose and cheeks, and forming large patches; in many cases they are congenital, in others they are developed about the ninth or tenth year; they remain during life, but are more evident during certain periods. They are more marked in youth, affecting the face, hands, neck and parts of the chest, but in some cases the whole surface has been spotted with them. These maculæ affect chiefly those of a lymphatic habit, whose skin is thin, white, and delicate; rarely the strong and sanguineous. They are sometimes caused by exposure to the sun's rays; in such cases they disappear on changing the climate, or by time. Lentigo is never accompanied with any disturbance in the health, nor does it demand any treatment.

Ephelides (Pityriasis Versicolor. Willan.) These are irregular patches, much larger than the spots of lentigo, of a saffron yellow colour, frequently accompanied by itching, and giving rise sometimes to a slight exfoliation. They generally are seen on the anterior part of the neck and breast, on the breasts of women, on the abdomen, groins and internal surface of the thighs. They rarely affect the face, except in women who are pregnant. Most frequently they are slowly developed and remain many weeks, or even months, if they are not subjected to medical treatment. Occasionally they appear a short time before the menstrual discharge and disappear as soon as that evacuation is established. They are not accompanied by any constitutional symptoms, but they cause a troublesome local itching, which is augmented by the slightest moral impressions or irregularities in diet; it is increased in females about the time of menstruation, and aggravated by their scratching the part, a practice which they can rarely resist.

Causes. They affect more particularly women whose skin is pale and thin, occasionally however individuals are liable to them whose skin is brown, and hair black, they are then of a deeper colour. They are sometimes caused by exposure to the sun, by irregularities of diet, salt or smoked food, or by the suppression of habitual evacuations, as the menses and hemorrhoids; in the majority of cases those who are the subjects of them are in good health.

Diagnosis. From pityriasis by the exfoliation being slight and powdery, not a desquamation of small scales of altered epidermis. Pityriasis is never accompanied by that constant itching which attends ephelis. The livid or copper-coloured hue, the absence of exfoliation, and of all itching, the history of the case, and often the concomitant symptoms, distinguish syphilitic blotches from this form of cutaneous discolouration.

Prognosis. Those which appear on the face at the commencement of pregnancy, remain perhaps only a few months or until delivery, they require no treatment; those which precede or accompany the menstrual periods are very ephemeral. Those occurring under other circumstances, produce no other inconvenience than a troublesome itching, and yield readily to an appropriate treatment.

Treatment. Astringent lotions, alkaline ointments, &c. are useless. The treatment which is most successful is, two or three sulphur baths in the week, and the internal use of the sulphurous waters, as those of Enghien or Cauterets, diluting the former at first with milk or barley-water. If the itching is insupportable, the patient may make use of a lotion consisting of an ounce of sulphuret of potash dissolved in two pints of water, on the days on which he omits the bath.

Nævi Materni. Our authors have not attempted to explain the causes of these curious productions, nor have they suggested any mode of removing them. Bateman, in his Synopsis, gives a much more full and complete account of their various forms; and in the article "Imagination," in Rees's Cyclopædia, he has, in an amusing and instructive article, discussed the question as to the share which the imagination of the mother has in the formation of these discolourations. There are two genera in this order characterized by deficiency of colouring matter; one general, or albinism—the other partial, vitiligo. As there is nothing new or of practical importance in the description of the former, we shall pass on to the latter.

Vitiligo. This may be a congenital or an accidental formation. The congenital has only been observed among the negroes who have occasionally been marked with various white spots, and consequently called "pied negroes." The accidental variety is most frequently seen in the scrotum, particularly of old people, in the form of irregular milk-white patches or longitudinal streaks; they are neither attended with heat, nor itching. They may increase to a very considerable extent. This disease has never been benefitted in the Hôpital St. Louis by M. Biett, who has tried various remedies. Bateman describes vitiligo under tuberculæ; he says that it commences by white shining tubercles, which in the course of a week attain their full size, that of a large wart, and then begin to subside, becoming flattened to the level of the cuticle in about ten days; in other cases they are less distinctly tubercular and more permanent. Of course Dr. Bateman did not describe this from imagination; the discrepancy between the two descriptions may be accounted for, by supposing that our authors have not seen the early stages of the eruption: in the few cases which we have seen, there certainly was no appearance of tubercles, but merely slightly elevated smooth white patches; but the complaints were of some months' standing.

DISEASES OF THE SKIN WHICH CANNOT BE REFERRED TO EITHER OF THE PRECEDING ORDERS.

Lupus (Herpes exedens—Dartre rougeante, Alibert.) Lupus commences sometimes under the form of reddish violet spots, but generally by livid, indolent tubercles, of various sizes. It is characterized by its tendency to destroy the surrounding skin and subjacent tissues, by means of unhealthy ichorous ulcers, covered with brownish adherent crusts. It most generally attacks the face, and the nose is the part most exposed to its destructive ravages, but it may affect the body and limbs; on the trunk it is observed, especially on the breasts and shoulders; when it affects the limbs, it is situated near the articulations, on the external surface of the fore-arm, or the back of the hand and foot; it sometimes is seen on the neck. It may be confined to one of these situations, or it may at the same time, or progressively, attack several of these parts of the body. Lupus, in the greater number of cases, commences by small, dull red, hard, indolent tubercles, appearing to affect only the most superficial layers of the skin; sometimes their summit is covered with small white and dry scales; frequently many tubercles unite, forming a surface of greater or less extent, not painful, soft to the touch, and finally ulcerating. But lupus does not invariably commence with tubercles; sometimes it begins with inflammation of the mucous membrane lining the nasal fossa, accompanied with redness and swelling of the nose; a thin scab forms there, this is removed, and is immediately replaced by a thicker incrustation, for the destructive process has commenced. In other cases, some part of the face, especially the end of the nose, becomes of a violet red colour, and slightly tumefied; this remains many months; the colour gradually increases, the surface becomes more vascular and ulcerates; finally, the skin may gradually become thinner and livid, looking like a cicatrix, but neither preceded by tubercles nor ulceration. For these reasons, M. Biett has not, in this instance, followed the classification of Willan, who placed lupus among "tuberculæ." He has divided the affection into three varieties; the division is wholly practical, and tends to facilitate both the study and the description of this formidable malady. 1. Lupus destroying the surface. 2. With deeply-penetrating ulceration. 3. With hypertrophy.

1. *Lupus destroying the Surface.* In some very rare cases, it seems to affect only the most superficial layers of the skin; this variety is observed on the face, especially on the cheeks; it neither commences with tubercles nor with ulcerations; the skin grows red, the epidermis exfoliates, the skin becomes gradually thinner, it is shining and smooth like the cicatrix of a superficial burn; the patient experiences no pain except on pressure, under which the redness disappears. After violent exercise, or excess in drinking, the surface becomes sensible. When the disease ceases to make any progress, the redness disappears as well as the exfoliations of the epidermis, but the skin remains thin, smooth, and shining. In other cases, small, soft, dull red tubercles form; after remaining some time stationary, they suddenly increase in size and number; the skin between them becomes swollen and œdematous, their bases unite, their summits ulcerate, and speedily the whole surface is covered with an irregular unhealthy ulceration, having a blackish, very adherent scab; this increases in extent in one direction, frequently healing and forming white, irregular cicatrices in another, especially if suitable treatment has been employed. In this way it gradually may extend, and even cover the whole face; in bad cases new tubercles form on the old cicatrices, which are soon involved in the general ulceration; as this process extends by means of the formation of new tubercles the ulceration is always bounded by a hard, rough, and tumefied border. The nose, which is rarely the primitive seat of this variety, becomes involved in the ulceration, and often, on the scabs falling off, part of the alæ nasi, or of its extremity, is found to have accompanied them. When the scabs have been removed and a suitable treatment has been adopted, they are not renewed, the surface becomes covered with small thin scales, and a solid white cicatrix forms in many points. This variety may occupy large surfaces of the breast, limbs, anterior part of the thighs, &c.

2. *Lupus with deeply-penetrating Ulceration.* This variety occupies particularly the alæ and the extremity of the nose; in the majority of cases its appearance is preceded by redness, swelling and coryza. One ala becomes swollen and painful, of a violet red colour, it slightly ulcerates, a small scab is formed, which on falling off is replaced by a thicker, each time this is attended by a true loss of substance, slight at first, but eventually very striking. The ulceration extends to the opposite side of the nose, and gradually increases, but is attended with but little pain; the cartilages are destroyed, and on removing the scabs an unhealthy ulceration is exposed, which discharges an abundant sero-purulent fluid. There is often a fetid discharge from the nose, and so considerable a tumefaction that the destruction is not recognized until the swelling subsides. In other cases there is neither coryza, nor tumefaction; a small, red, smooth and soft tubercle forms, which eventually ulcerates. The extent of the destruction is variable, sometimes the whole nose and its septum are destroyed, or only its extremity; often the surface of the nose only has been destroyed, so that it is generally diminished in volume and more pointed, the nostrils having a constant tendency to close; it is constantly red, except along the angle of the junction of its two lateral portions, where the projecting cartilage, of a yellow colour,

is plainly seen through the transparent cicatrix. In other cases, a portion of the nose appears to have been cut off with a knife. The extent of the destruction is not in relation with the duration of the disease; sometimes after many years but a small portion of the nose is destroyed, whilst the whole organ in other cases has been eaten away in 10 or 15 days. In almost all cases of lupus of the nose there exists at the same time an affection of the mucous membrane of the nasal fossæ, and even the whole septum narium has been destroyed before the nose has suffered externally. At other times the ulceration is continued from the skin to the pituitary mucous membrane; it creeps along the floor of the nasal fossæ and attacks the mucous lining of the palate and the gums themselves. The disease may extend itself from the nose to other parts of the face.

3. *Lupus with Hypertrophy.* This commences almost exclusively in the face, to which it is confined, by soft, indolent, and but slightly elevated tubercles, generally numerous; they occupy a considerable surface, such as a great part of the cheek, and sometimes the whole face; they do not ulcerate, or at least the ulcerations that are sometimes seen are rare and almost accidental; gradually the base of these tubercles enlarges, the skin and subjacent cellular tissue become the seat of an indolent tumefaction, after some time the face is spotted with reddish points, which are the tubercles brought by the tumefaction of the subjacent tissues to the level of the skin; among them are numerous white spots or true cicatrices, which have replaced the old tubercles, although these have not been previously destroyed by ulceration; in fact, these tubercles constantly exfoliate and are gradually destroyed. In such circumstances the face may acquire a prodigious size, the cheeks are soft and flabby, their tissue resembling that of elephantiasis; the forehead and eyelids are so tumefied, that the eyes are almost entirely covered with these hypertrophied masses; the lips and ears participate in this general enlargement. This disease may persist for an indefinite period; when the parts begin to recover their natural state, which they never do spontaneously, their circulation is increased, slow resolution of the tubercles takes place, and the hypertrophy gradually diminishes, but hardly ever wholly subsides. There is another variety of lupus with hypertrophy, in which the ulcerations which succeed either to the violet spots or to tubercles become covered with soft red, prominent, and small fungous tumours. This is a very severe form.

These three varieties of lupus may exist simultaneously in the same individual; thus the first may cover one part of the face whilst the nose is being destroyed by the second, or whilst the other cheek is the seat of the third. In some cases, the variety attended by superficial ulcerations may be accompanied by hypertrophy; in some instances these ulcerations destroy the lower eyelid, so that the skin of the cheek is directly continuous with the conjunctiva covering the eye; this membrane, from constant exposure, becomes inflamed, and eventually opacity of the cornea produces complete blindness; in other cases partial destruction of the inferior lid is the cause of various forms of ectropium. In other circumstances, on the removal of the thick and long-adherent incrustations, the nostrils will be found to have been completely obliterated by the hypertrophy or by neglected cicatrices. In a similar manner, the size of the mouth is occasionally considerably diminished. Notwithstanding the destructive effects of this disease the general health is not affected, the patients enjoy a good state of health; the menstrual discharge, alone, in some women seems to be deranged. Erysipelas of the face very frequently complicates this affection, and generally, instead of aggravating it, is beneficial. It has in many cases, especially of lupus with hypertrophy, increased the vitality of the skin so as to produce a speedy resolution. Finally, in some of the most destructive cases where the lupus successively destroys the skin, the cartilages, and the bones, symptoms of chronic gastro-enteritis come on, and a slow fever with diarrhœa destroys the patient. This unfortunate termination is extremely rare. The bones are very seldom destroyed by lupus; many instances have occurred in the Hôpital St. Louis of patients who have been affected with this disease for many years, without any energetic treatment having been employed, and very rarely has any destruction of the osseous system occurred, excepting the loss of the ossa nasi, which bones have frequently disappeared, leaving a triangular opening divided by what remains of the septum-narium.

Causes. Lupus affects especially children and adults, it has been very rarely observed after the fortieth year; it attacks both sexes, and nearly in the same proportions, and those living in the country seem more disposed to it than the inhabitants of towns; this may perhaps depend on bad food and unhealthy localities. Very frequently it commences in scrophulous children and remains until puberty; it can only be said to co-exist with scrophula, as many of the individuals who are attacked with it are robust, healthy adults. The form of lupus with hypertrophy is especially connected with a highly scrophulous constitution.

Diagnosis. The circumscribed indurations which succeed the pustules of acné rosacea might be mistaken for the tubercles of lupus in an early stage; but the red colour, the erythematous areolæ, the pre-existence of pustules, and their frequent presence around the part are sufficient marks to distinguish acné, from the livid, indolent tubercles of lupus, which were preceded only by a light violet stain. Lupus with hypertrophy may be confounded with the tubercular elephantiasis (E. Græcorum), but in elephantiasis the skin is yellow, there are small tuberculated and unequal tumours attended with partial hypertrophy of the integuments of the face differing from the uniform and equal tumefaction of lupus; if the tubercles have ulcerated, the ulcerations of elephantiasis G. will be found to be more superficial and to have no tendency to attack the healthy parts. Elephantiasis of the Greeks in general exists in many parts of the body at the same time, and in this stage is attended with such general and local symptoms as at once distinguish it from lupus. On a superficial examination the incrustations of lupus may be taken for the scabs of impetigo, but the latter are yellow, rough, prominent, slightly adherent; the former brownish, thick and very adherent, besides attention to the elementary lesions, and to the cicatrices and ulcerations of lupus will alone be sufficient to establish the diagnosis. There remain two other diseases which are often much more difficult to distinguish from lupus, and whose diagnosis is highly important, these are noli me tangere, and some varieties of syphilitic eruptions. M. Biett applies "noli me tangere" to true cancerous affections of the face which have been confounded with lupus. Cancerous tubercles are hard, generally indolent, and painful, appearing in advanced life either on the lips, cheeks, or nose, where they remain a considerable time without ulcerating; lupus hardly ever is observed in individuals of advanced life, it usually commences with numerous tubercles, noli me tangere by a solitary one; the tubercles of lupus are situated in the superficial layers of the skin and are constantly indolent, whilst cancerous tubercles are surrounded by a hard and circumscribed base, and are usually the seat of very acute lancinating pains. Noli me tangere is accompanied by inflammatory tumefaction of the soft parts, it is usually exasperated by cauterization, and when once ulcerated it not only destroys the skin and cartilage of the nose but the bones to a considerable depth; this is never observed in lupus. Cancerous ulcerations are moist, painful, with everted edges; they have a fungous appearance, and are not covered with dry thick incrustations. Syphilitic tubercles may be mistaken for those of lupus; but the former are rounder and more voluminous than those of lupus; their summits never exfoliate, nor are they so prone to ulceration; syphilitic tubercles of the face are never found in children. The ulcers which succeed syphilitic tubercles are deep, their edges are tumefied, perpendicular and of a coppery red, whilst those following the tubercles of lupus are of a dull red, and are superficial. Lupus with deeply penetrating ulceration is more likely to be confounded with syphilitic ulcers, particularly when the nose is destroyed; the mode in which this destruction takes place distinguishes them. Thus, in lupus, the skin is at first destroyed, the cartilages and the ossa nasi subsequently; in syphilis, at least under these circumstances, the disease has commenced in the bones, these have become carious, and the soft parts then ulcerate. The constitutional symptoms of secondary syphilis afford another means of diagnosis.

Prognosis. This is always unfavourable, not from lupus endangering the life of the patient, but from its intractable nature, its destructive progress, and the indelible and deforming cicatrices which remain even when it has been cured. As long as the cicatrices remain soft and blueish, and on pressure give the feeling of fluctuation, and as long as they are circumscribed by tubercles, the return of the disease is to be feared.

Treatment. General treatment may be of service if the patient is scrofulous: in such cases some advantage may be derived from the internal administration of muriate of lime, in the proportion of a drachm to a pint of water; a spoonful of this may be taken every morning for five or six days, it may then be gradually increased until the patient takes 12 or even more spoonfuls daily; the patient should be put on generous diet, and live where he can breathe a pure air. In other circumstances, to hasten the resolution of the tubercles, active remedies have been employed, which, together with judicious local treatment, have sometimes contributed to the cure, such are, the animal oil of dippel given at first in doses of five or six drops, and gradually increased to twenty-five; the asiatic pills; Pearson's solution of arsenic, in scruple doses, gradually increased to a drachm, or Fowler's solution, (liq. arsenicalis,) commencing with four or five drops daily, and gradually augmenting the dose to twenty or twenty-five drops. Attention should be paid to diet, &c. and exposure to extreme cold scrupulously avoided, as well as excessive heat. The local treatment consists, 1st, in applications whose object is to modify the vitality of the skin, so as to produce resolution of the tubercles; 2d, in caustics, to change the state of the morbid surface, to circumscribe its ravages, and to obtain firm cicatrices. Those applications intended to produce resolution of the tubercles, are to be applied before these have ulcerated, and to those which surround cicatrices; they are especially suited to lupus with hypertrophy. The most useful are ointments, consisting of one scruple or half a drachm of the proto-ioduret of mercury, or of twelve or fifteen grains or a scruple of the deuto-ioduret to an ounce of lard;—slight frictions are to be made with these ointments on all the points which are covered with tubercles. Twelve or fifteen grains of the ioduret of sulphur to an ounce of lard is a very energetic and successful remedy. In some cases these remedies have appeared to hasten the ulcerative process; if this has commenced, cauterization must be employed. If the disease is extensive, the cautery should be applied at first to a small part of the surface, not at once to the whole disease. If the surface is ulcerated, moist and clean, the cautery may be directly applied; but if there are scabs, these must be previously detached by poultices: lastly, if the tubercles are not ulcerated, but are violet, dry, and accompanied by more or less of tumefaction of the skin, or if it is a case of lupus with hypertrophy, to which it is proposed to apply this remedy, the skin should be destroyed previously by blisters. The animal oil of dippel acts less as a caustic than an irritant, which sometimes modifies the action of the part to which it is applied very advantageously, but it rarely produces a complete cure. It is particularly suitable where the nose is the seat of an indolent and chronic swelling, of a violet colour, with a constant exfoliation of the epidermis. In order to apply it, a small camel's hair-pencil may be dipped in this liquid, and the diseased surface frequently smeared with it. Cauterizations with nitrate of silver, potash, and butter of antimony, succeed less frequently than the following applications. The powder of Dupuytren, consisting of one or two grains of arsenious acid and 98 of calomel, is a very useful and mild caustic; it is suitable in lupus of slight extent affecting children, women, or irritable men; the sore is to be sprinkled with this powder, by means of a little puff; any crust which might have covered the surface being first removed by a poultice, or by other means. Although the application of this caustic is not generally followed by pain or swelling of the surrounding parts, it is better not to apply it each time to a surface much larger than a shilling; it forms a greyish, very adherent incrustation, which does not fall off for a very considerable time, unless emollient applications are used. The arsenical powder du frère Côme is a more valuable and energetic remedy, and requires to be employed with prudence. It is suitable in those cases where less active applications fail in stopping the destructive progress of the disease, and particularly to that variety of lupus which is attended with deeply-penetrating ulceration. This liquid paste should be applied to a surface not so large as that of a shilling, by means of a spatula. This is constantly followed by erysipelas, sometimes very slight, at other times severe; but, although our authors have seen it applied by M. Biett in the wards of the Hôpital St. Louis, a large number of times, not a single case has been attended with any dangerous symptoms; the erysipelas has yielded in a few days to leeches behind the ears, stimulating foot-baths, abstinence from food, and emollient or laxative glysters. Finally, the acid nitrate of mercury,* which is an energetic caustic, has been employed with much success in the wards of M. Biett. It produces an erysipelatous inflammation of a less severe character than that following the arsenical paste. It may be applied not only on the ulcerated surface, but to the tubercles themselves, and to the cicatrices which remain soft, blue, and fluctuating. A surface about the size of a crown-piece (5 franc piece) may be cauterized by means of a small pledget of lint dipped in this acid, and passed over the disease; and charpie moistened in the same liquid may be applied over the cauterized part. The part becomes white, a yellowish crust forms which is detached after eight or fifteen days. This application is generally very painful, but the suffering is momentary. The actual cautery is not advisable, as it generally aggravates the disease. When the cauterization has been effectual, it is found, on the crusts becoming detached, that the ulceration beneath them has a healthy appearance and often speedily cicatrizes; but, in the majority of cases, a single cauterization is not sufficient—it requires frequent repetition, even for years, when the disease is extensive, as it will yield only to perseverance in such treatment. Great patience is requisite in the surgeon as well as in the patient. Unless care is taken, the formation of cicatrices may be attended with considerable deformity; for example, the openings of the nostrils may become permanently obliterated, unless pieces of properly prepared sponge are daily introduced;—it should be recollected that the tendency which these openings have to become closed, continues even after the ulcerations are healed. The local and general treatment of lupus will in general sometimes be advantageously seconded by the use of simple or vapour baths; the vapour douche baths are particularly useful in lupus with hypertrophy. We need not apologize for dwelling so long on this formidable affection, when the text-book of English practitioners for diseases of the skin contains its description in less than a dozen lines with this excuse—" of this disease I shall not treat at any length, for I can mention no medicine which has been of any essential service in the cure of it."—*(Bateman's Synopsis, p.* 408, 7*th edition.)* The description given by Mr. Plumbe is evidently derived from a very limited number of cases, and is deficient in diagnosis.

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* One drachm of nitrate of mercury dissolved in an ounce of nitric acid.—*(Formulaire des Hôpitaux, &c.)*

Syphilitic Eruptions. (Syphilides—Alibert.) Mr. Carmichael was the first in this country who applied the exact and descriptive nomenclature of Willan to the various forms of venereal eruptions. Previously to the publication of his Essay on the Venereal Disease, they were described under the name of copper-coloured blotches, scabby spots, and other terms quite as indefinite. John Hunter described but one form, that of scaly blotches terminating in ulceration; Dr. Willan described, with his usual accuracy, syphilitic lepra; and Dr. Bateman syphilitic ecthyma. Alibert recognized more numerous varieties and formed them into a class which he denominated "syphilides," including as distinct varieties not only the tubercular, pustular, squamous, and papular forms, but the various kinds of ulcerations, the sequelæ of these eruptions: this would have been a difficult task for a man with a less vivid imagination than M. Alibert; but it must be allowed that, although he was tramelled by a most confusing classification, and has misplaced sadly his sentimental reflections, yet that his descriptions are clothed in language which for accuracy, ease, and elegance, has rarely in medical writings been surpassed. M. Biett, who has made these eruptions his particular study for many years, has been in the habit of giving clinical lectures on the whole group, and under the class "syphilides" has arranged the different varietes according to the system of Willan, by their primary external characters. This may be very convenient in a limited course of lectures, and it may afford many advantages to the student, by presenting him at one view with these hitherto imperfectly described, but most important forms of cutaneous diseases. But such a division in a systematic work like that before us, which professes an arrangement founded on external characters, and which severely criticises the attempt of Mr. Plumbe to form a classification on the supposed causes of these diseases, is open to disapprobation. We will quote our authors' own words, that our readers may judge whether their unnecessarily harsh criticism does not, in this instance, equally apply to themselves. "M. Plumbe qui a voulé adopter cette classification bizarre dans un ouvrage publié recemmement, aurait plutôt ajouté de nouvelles difficultés à celles qui existent déjà dans cette branche de la pathologie, si un ouvrage jait dans cet esprit, pouvait exercer quelque influence sur la science." We certainly do not approve of Mr. Plumbe's attempt at a new classification, but we strongly object to Messieurs Cazenave and Schedel's classing syphilitic eruptions under the anomalous cutaneous diseases which cannot be referred to any of the orders of Willan, when each variety is founded by them on the essential characters of those orders themselves.

M. Biett recognizes six forms of venereal eruptions, the exanthematous, vesicular, pustular, tubercular, papular, and squamous. All these are in general of a copper colour, less marked in the acute stage, but still never of an inflammatory red. They are almost always of a circular form; when the eruption forms considerable patches from the union of many tubercles, or pustules, &c. the circles are not complete, but small segments of circles are seen in the borders of the eruption; the scales are always thin, dry, and greyish; the crusts thick, greenish, sometimes black, always hard and grooved. These eruptions may affect any part of the skin, but they are most commonly situated on the forehead, ala nasi, back and shoulders.

1. *The Exanthematous Syphilitic Eruption.* There are two varieties; the first is primary and acute, the second consecutive and chronic. The first appears under the form of small, greyish, irregular spots of a coppery red, slightly confluent, and disappearing slowly under the pressure of the finger; it affects chiefly the trunk and limbs—it always accompanies the primitive symptoms, and especially gonorrhœa. These little spots often appear spontaneously in the course of the night; they are accompanied by slight itching, and they gradually decline in a few days, leaving a light greyish stain, which often lasts many months. The other variety is secondary; it consists of spots of a very deep copper colour, and generally exactly circular, and never confluent, nor do they disappear wholly under the pressure of the finger. They may affect the skin of the trunk and limbs, but they are very frequently found on the face and forehead; they are generally about the size of half-a-crown; sometimes, though rarely, they are covered with a slight exfoliation, and attended with itching. They are often accompanied with other syphilitic eruptions or symptoms. This eruption terminates by resolution or by slight desquamation; it never ulcerates.

2. *Vesicular Syphilitic Eruption.* This is the rarest form. M. Biett has

seen it but three or four times. The vesicles are small, their base is surrounded by a red coppery areola, their progress is extremely slow, they produce no local symptom, no itching, and hardly any heat; they gradually dry up, the liquid becoming absorbed; in some it became opaque and concrete, giving rise to a small scale, which ultimately was detached; they all leave a copper-coloured stain, which has a decidedly syphilitic character. These are the appearances of the eruption in a case which is detailed, and which was the only one which had at that time fallen under the observation of our authors. Its syphilitic nature was recognized by M. Biett, who had seen two similar cases; and a decidedly syphilitic ulcer in the throat in the same patient more fully confirmed the accuracy of the diagnosis. Since the publication of this work, another case has occurred in the Hôpital St. Louis, which M. Cazenave has reported in the Journal Hebdom. Mars 14, 1829. It was complicated with syphilitic lichen, and with venereal ulcerations of the edges of the mouth. The patient was put on a restricted diet, and completely recovered without the use of mercury. Mr. Lawrence, in his surgical lectures, Medical Gazette, Vol. 5, has mentioned vesicles as occasionally accompanying other venereal eruptions, but he has neither described their peculiar appearance nor progress; we are not aware that any other English writer has alluded to them.

3. *Pustulary Syphilitic Eruption.* This may consist either of psydracious or of phlyzacious pustules. The eruption of psydracious pustules may occupy any part of the cutaneous surface, but it is most frequently found on the forehead and face; the pustules are small, extremely numerous, in groups; they are conical, and of a deep red colour; their base is hard, and surrounded by a copper-coloured areola; they appear in succession, so that they are found in different stages in the same group. Their progress is slow, but the inflammation sometimes extends deeply enough to leave a small white circular cicatrix, depressed in the centre, and of the size of a pin's head. These small cicatrices have been frequently attributed to ulcerated papulæ, from not distinguishing the elementary lesion. Psydracious pustules rarely terminate by ulceration; they dry, and form a yellow greyish crust; this leaves in some cases a cicatrix, but most frequently a stain from vascular injection. In the majority of cases the eruption consists of phlyzacious pustules, larger, generally isolated, rather depressed in the centre. Sometimes they are of the size of a lentil, numerous and but slightly prominent; their base is hard, and they contain but a small quantity of a yellowish-white purulent fluid, which contrasts strongly with the copper hue of the little tumour. They appear especially on the chest and face, and are rarely followed by ulcerations; a small crust forms, which falls off, and leaves often a cicatrix, sometimes a livid injection or a small chronic induration. It occasionally happens that numerous pustules become inflamed; they contain more purulent matter; several unite; they open, and the liquid they contained concretes into a thick greenish crust, surrounded by a large violet areola; this is always succeeded by deep ulcerations. At other times the pustules are larger, and very similar to those of ecthyma; these are generally few and distinct; they appear especially on the limbs, and chiefly on the legs, at first as a lived spot about the size of a shilling; the epidermis becomes slowly elevated by a greyish sero-purulent fluid; this is surrounded by a large copper-coloured areola; after some days it opens,

and the liquid that escapes forms a very hard blackish crust, this gradually becomes very thick, and marked with circular furrows; this is not accompanied by local inflammatory symptoms; there is but little heat or pain. The crusts are very adherent; when they fall off or are displaced by emollient applications, round ulcerations are exposed, generally deep, with sharp and perpendicular borders, which are formed by a hard violet-coloured tissue; the bottom of the ulcers is greyish, dirty, and unhealthy; they have no tendency to increase in size; gradually the crusts again form, and fall off, until at last, by appropriate treatment, they become thinner, the ulcerations heal, and are replaced by sound and indelible cicatrices. This is the most common form of pustular syphilitic eruptions, and it is this which affects infants who are born with a syphilitic taint. In these cases the pustules are superficial, flattened, oval, and numerous; they are covered with blackish crusts, most frequently thin, and followed by small ulcerations; the physiognomy of such infants is very characteristic, their faces are marked with deep wrinkles, and they have the aspect of little old men; their skin is earthy, they are thin and blanched. Syphilitic pustules form in some cases around, in others beneath, the nails; they are followed by ulcers with a sanious discharge; the nails become detached, and are slowly re-produced, but they are thin, small, narrow, greyish, and friable.

4. *The Tubercular Syphilitic Eruption.* This is one of the most frequent forms of the venereal eruptions. The tubercles are of various sizes, of a red or copper colour, oblong, flattened, or conical, generally in groups, often forming circles: sometimes they remain for an indefinite time indolent, smooth, and polished; at other times they become covered with a slight desquamation, or they ulcerate. They most frequently form in the nose or in the commissures of the lips, so that a tubercle in one of these situations is almost a pathognomonic sign of a venereal affection. They may affect any parts of the body. Syphilitic tubercles present various appearances; the principal varieties are the following. Sometimes they are small, varying in size from the head of a pin to a pea, regularly arranged in small circles, the middle of which is entirely healthy; each tubercle is partially covered by a hard grey scale; they are of a coppery colour, rarely followed by ulceration. They leave a red livid stain, which eventually disappears. This variety is chiefly seen in the forehead and neck. The tubercles may be larger, oval, or pyriform, and very prominent, in irregular groups; sometimes they are as large as an olive, smooth and shining, never or very rarely terminating by ulceration or covered by exfoliations, or painful; they may remain stationary for years. It attacks the face, and chiefly the cheeks and extremity of the nose. In many cases the tubercles are large, isolated, rounded, few in number, of a violet red colour, surrounded by a coppery areola; they are most frequently developed in the face—on the upper lip and nose. Sooner or later they become painful and inflamed, and ulcerate; new tubercles are formed around the old ones, which go through the same course; the ulcers unite, and are covered by a hard, blackish, adhering incrustation; this when removed leaves an irregular ulceration, the borders of which are sharp and perpendicular, formed by a hard violet tissue; the crusts are renewed and the ulceration extends, sometimes destroying one ala of the nose, or eating away part of the lip. In the majority of those cases where the destruction of the bones, cartilages, and integuments of the nose has

been complete, the disease has commenced in the bones and internal tissues, and has proceeded to the surface. In other cases the tubercles are large, red, hard, and rounded, dispersed over different parts of the body, and chiefly on the back; they are sometimes the size of a small nut, and they finally ulcerate. The ulcerations which are superficial and not many lines in breadth, spread in various directions, assuming sometimes a circular, at other times a spiral or a zig-zag form; healing at one extremity, and extending at the other;—they are covered with thick, hard, black, and very adherent crusts, and they leave indelible scars. Most frequently fresh crops of tubercles are constantly formed; and as all do not ulcerate at the same time, they are seen in all their different stages on the same individual. Alibert described this as "syphilide pustuleuse serpigineuse." Tubercles assume occasionally another form; they are round, thick, and flat, and their surface becomes the seat of linear ulcerations. Sometimes these are not larger than a lentil, and form at the junction of the alæ nasi with the cheek, or at the commissure of the lips; at other times they are nearly the size of a shilling and some lines in thickness, of a deep livid red colour, occupying the scrotum, verge of the anus, or pubes; their surface becomes cracked, as it were, by linear ulcerations, which discharge a sanious and nauseous fluid.

5. *The Papular Syphilitic Eruption.—(Syphilitic Lichen.)* This is an eruption of small, hard, solid elevations, slightly raised above the level of the skin, containing no liquid, terminating either by resolution or desquamation, and never followed by ulcers or cicatrices. It may be acute or chronic. (1.) In the acute form the papulæ are very small and very numerous, slightly conical and of a coppery tint; in some parts the areolæ which surround the pimples, mixing together, give the skin the appearance of a large copper-coloured surface, studded with innumerable elevated points of a lighter colour. These papulæ may be found on any part of the body, but more particularly on the face; they are all found at the same time, and within 24 or 48 hours. Generally they are not accompanied by any feverish symptoms; they often accompany or immediately follow gonorrhœa, as Mr. Carmichael has observed. In the majority of cases their duration is short, and they terminate by resolution in a few days. It is possible that, as in lichen agrius, their summits may ulcerate; when this is the case, the crusts which form from the concretion of the discharge are small and thin, and are never followed by scars. (2.) When chronic, the papulæ are larger, flattened, the size of small lentils, and of a copper colour; their development is slow and successive; they are very numerous and in groups, producing no itching. They occupy the limbs, especially in the direction of extension; also the forehead and the hairy scalp. They are frequently accompanied by other syphilitic eruptions, especially the pustular. Generally their duration is tedious; the summit of each papula becomes covered with a dry, greyish pellicle; this falls, and is as often renewed, until the elevations are reduced to the level of the skin, which for some time is marked by greyish white spots.

6. *The Scaly Syphilitic Eruption.* This is distinguished by dry greyish scales covering small copper-coloured elevations, terminating by resolution or desquamation, never by ulceration. In the greater number of cases it assumes the form of psoriasis, and particularly of psoriasis guttata. The

eruption may be confined to one part of the body, but usually it is seen at the same time on the neck, back, breast, anterior surface of the abdomen, face, limbs, and sometimes on the hairy scalp; the size of the patches varies from that of a "centime" to a shilling; they are generally isolated, irregularly rounded, slightly elevated, covered by thin, hard, whitish, slightly adherent scales, which on falling expose smooth, shining, copper-coloured elevations, not red and cracked as those of psoriasis. When they resemble the patches of psoriasis guttata, each is surrounded by a small white border, exactly similar to that which indicates the remains of a vesicle: M. Biett regards this as a pathognomonic characteristic. In some rare cases the patches unite. That variety which Willan has described as lepra nigricans is considered by M. Biett to be a syphilitic form of lepra. The palms of the hands and the soles of the feet are sometimes attached by a very peculiar form of the scaly syphilitic eruption. The mass of scales is dry and horny, so that it can be completely detached by merely inserting the nail beneath one point of its circumference, and raising it a little; the surface beneath is not elevated, but is of a violet colour and indurated. This generally accompanies other syphilitic eruptions, especially the scaly.

The various secondary symptoms which occasionally accompany syphilitic eruptions are detailed; but as they are too well known, and are more fully examined in all works on the venereal disease, we shall not enter at all on the subject here. Syphilitic eruptions may be complicated with various cutaneous diseases, not depending on the same cause, as eczema, herpes, scabies, &c. Several of these different forms of syphilitic eruptions may exist at the same time on the same patient; the scaly variety is most frequently uncomplicated.

Diagnosis. 1. The exanthematous syphilitic eruption, when acute, may be confounded with roseola and urticaria—when chronic, with ephelis. The rosy colour, and the general symptoms which accompany roseola, distinguish it from the greyish patches of this syphilitic eruption. The colour of urticaria is either redder or whiter than the rest of the skin, never greyish; the patches of urticaria are more elevated, produce more intense itching, and they disappear suddenly, and again are spontaneously re-produced. When acute, this syphilitic eruption almost always accompanies the primary symptoms, and particularly gonorrhœa, or at least almost immediately follows them. The ephelides are larger than the chronic exanthematous syphilitic eruption; they are irregular and cover a larger surface of the body; they occupy especially the belly, and the anterior surface of the chest; the venereal patches are usually circular, rarely exceeding in size half-a-crown, few in number, principally situated in the forehead and eyebrows. The ephelides are yellow, attended with itching, and constantly covered with a furfuraceous exfoliation. The venereal patches are copper-coloured, sometimes blackish; they occasion no pruritus, and very rarely are covered by a slight desquamation; they never unite to form large irregular patches, as is the case with ephelides; they are almost always accompanied by some symptom of general venereal infection, often by iritis.

2. The principal diagnostic marks of the vesicular syphilitic eruption are the coppery areola, the slow progress of the inflammation, the preceding and especially the concomitant symptoms.

3. Pustular syphilitic eruption may be confounded with acne and ecthyma.

The pustules of acne differ from the psydracious pustules of syphilis, in being more prominent, red, and sometimes surrounded by a well-marked erythematous areola (A. rosacea); in the syphilitic eruption the pustules are more violet, and surrounded by a copper-coloured base. The skin which separates the pustules of acne is red, shining, oily, and interspersed with black points; it is earthy and shrivelled in the venereal eruption. The pustules of this latter affection are followed by scars; this is rarely the case except in acne indurata, which differs in many points from the other varieties. The phlyzacious pustules of the syphilitic eruption are, with some difficulty, distinguished from those of ecthyma; but, in ecthyma, the pustules are surrounded by a purple red areola; in the syphilitic eruption, it is invariably copper-coloured. The crusts of the latter are thicker and more adherent—sometimes almost black, having circular furrows, the ulcers beneath them are round, deep, with sharp and perpendicular edges, followed by a depressed and indelible cicatrix.

4. The tubercular syphilitic eruption may be confounded with lepra, some varieties of psoriasis, acne indurata, and lupus. In some cases previously described, syphilitic tubercles are arranged in circles, but these circles are not continuous as in lepra; the tubercles are smooth, small, copper or violet-coloured, covered with thin and hard lamellæ, always smaller than the induration to which they are fixed, whilst the scales of lepra are larger, extending beyond the elevated borders, so as to cover them, and sometimes the centre of the patch itself. The same characters will distinguish partially-cured syphilitic tubercles from psoriasis gyrata, for which they are often taken. The tubercles of acne indurata, which are constantly found on the back, mixed with numerous cicatrices, are often mistaken for syphilitic tubercles; but these latter, when situated on the back, are usually hard, rounded, and of a copper colour, often equal in size to a small nut; they usually ulcerate, and form the variously-convoluted creeping ulcers, very different, in the scars which they leave, to the small rounded cicatrix of acne. The early tubercles of lupus are sometimes with difficulty distinguished from those of syphilis; but in lupus they are reddish, soft, slightly developed, their summit is shrivelled and cracked, the skin surrounding them is swollen and œdematous; whilst syphilitic tubercles are more prominent, hard, smooth, shining, and of a copper colour. Lupus usually commences on the cheeks, tubercular syphilitic eruptions on the forehead and alæ nasi. The former attacks particularly the scrofulous, the lymphatic, and the young; the latter, persons of a more advanced age, and is almost always accompanied by other syphilitic eruptions, and by various secondary symptoms.

5. The papular syphilitic eruption may be confounded with scabies and lichen. The very small, slightly conical, syphilitic papulæ have been mistaken for those of itch; but the eruption of scabies is constantly vesicular—that of the other papular. The papulæ of lichen simplex are usually confined to one region of the body, and especially to the limbs; syphilitic papulæ cover the whole body, particularly the face; the former are not so deeply coloured, nor have they the violet areolæ.

6. The scaly syphilitic eruption may be confounded with lepra or psoriasis. The black colour of the syphilitic lepra (L. nigricans) sufficiently distinguishes it from the common lepra. The scaly syphilitic eruption may

be mistaken, in some cases, for psoriasis guttata, the form of which it occasionally assumes; but the copper-coloured patches of the former, covered with thin, small, greyish scales, and surrounded by a narrow, white circular border, differ very considerably from the thicker scales of psoriasis guttata, which expose, in falling, a red and cracked surface. Independently of these more minute characteristic marks, the concomitant symptoms of secondary syphilis, as pains in the bones, nodes, ulcers in the throat, iritis, &c. most materially assist the practitioner in forming a diagnosis.

The incrustations which succeed pustules, or more frequently tubercles, may be mistaken for the scabs of impetigo; but in the latter the crusts are yellow, easily separated, merely, as it were, placed on the surface of the skin; in the former, they are greenish and almost black, sometimes marked with circular depressions, hard, adherent, and penetrating, more or less, the thickness of the skin. Syphilitic ulcerations may be confounded with those of lupus, but the former are deep and excavated; their borders are hard, callous, sharp and perpendicular, surrounded by a copper-coloured areola; the latter are superficial, or even raised, their borders are soft and of a violet colour, and the skin surrounding them is swollen, as if œdematous.

Prognosis. Venereal eruptions in themselves are not dangerous. The state of the patient warrants an alarming prognosis, only when they are accompanied by other severe secondary symptoms. The tubercular eruption is the most serious, but the scaly is generally very tedious.

Causes. In some cases, syphilitic eruptions are excited by errors in diet, severe exercise, mental agitation, &c.; in other cases, no such occasional cause can be discovered, but in every case the proximate cause is the venereal virus. They have been attributed to mercury; but patients are often covered with these eruptions who have never taken a grain of that mineral. In certain states they are contagious; they may be hereditary; thus infants at birth have been covered with syphilitic pustules, or the eruption has formed some little time after birth. In other cases, the infection is conveyed to the child by means of the milk of its nurse; and frequently the infant infects the nurse. M. Biett considers that these eruptions may follow gonorrhœa, as well as primary venereal sores, buboes, &c.

Treatment. Mercurial preparations are the most useful remedies that can be employed in the cure of syphilitic eruptions. Their failure is generally owing to their injudicious administration; they should never be given if the symptoms are acute, and the dose should be regulated by the strength of the patient and the extent of the disease. In general, the liquor of Van Swieten (Oxymur. hydrar. gr. xvj. Alcohol. ℥ss. Distilled water, ℔j.—Dose, half an ounce night and morning in milk, solution of gum, or water), or the following pills may be employed.

℞. Hydrargyri oxymuriatis.... gr. xij.
Extr. aquos. opii .... ℈j. Misce et divide in pilulas xxxvj. quorum æger sumat j. omni die.

If the patient is irritable and weak, so that there is a probability of the mercury's producing irritation of the gastro-intestinal mucous membrane, a pill, containing a grain of the soluble mercury of Hahnemann (black oxide of mercury), may be given daily. Mercurial preparations, judiciously administered and in small doses, are rarely injurious; if symptoms of abdominal irritation should come on, their use should be interrupted for the time.

To guard against relapse, the medicine should be continued for a month or more after the eruption has disappeared. Sudorifics, particularly when combined with other remedies, are often very useful, as the decoctions of guaiacum or sarsaparilla. The ptisan of Feltz has sometimes been very beneficial, especially when mercury has failed; the following is the formula.

℞. Radicis sarsaparillæ concisæ..	℥iij.
Icthyocollæ	℥ss.
Pulv. antimonii crudi	℥iv.
Aquæ fontanæ	℔vj.

The antimony to be inclosed in a bag of muslin, and the whole boiled gently until the water is reduced to one-half. A pint and a half is the proper daily dose. M. Biett, in some cases where mercury has failed, has succeeded in curing the eruption by full doses of subcarbonate of ammonia; he commences with the daily dose of a drachm of the salt in some mucilaginous draught, and he gradually increases it to two or three drachms. He has found it advisable to hasten the resolution of the tubercles, by gently rubbing in with the end of the finger an ointment, composed either of a scruple to half a drachm of the proto-nitrate of mercury, or one scruple of the proto-ioduret, or 12 grains of the deuto-ioduret of mercury to an ounce of lard. For the same pupose, but with still more beneficial effects, M. Biett has prescribed the ioduret of sulphur, in doses of from 20 to 30 grains to the ounce of lard.

It is sometimes necessary to endeavour to produce a new action in syphilitic ulcers, or to stop their destructive progress; for this purpose, stimulating ointments, containing the deutoxyde, the deuto-ioduret, or the cyanuret of mercury, may be applied; or more energetic caustic applications, as the acid nitrate of mercury, applied by means of the feather of a quill to the diseased surface. M. Biett has found that the severe pain of these ulcers has been soothed by the application of an ointment, made by mixing 20 drops of medicinal hydrocyanic acid with two ounces of cerate. The action of these various remedies may be assisted by baths; vapour douches, directed on the tubercular eruption for 12 or 15 minutes daily, hasten its resolution: alkaline baths are to be employed in the pustular eruption, and vapour baths in the scaly. Those large flat tubercles, which have been described as forming on the scrotum and verge of the anus, are improved and cured by cinnabar fumigations. Occasionally syphilitic eruptions, particularly when complicated with other alarming secondary symptoms, resist every treatment which has been recommended, but give way to opium, in large doses. M. Biett commences with half a grain of the watery extract of opium, and gradually increases it, if necessary, to four grains, or even more.

If an infant, before it is weaned, is attacked by syphilitic eruptions, the mother or nurse who suckles it should take the liquor of Van Swieten, or what is better, should rub into her legs and thighs camphorated mercurial ointment. If the person who suckles the child is too weak to adopt this treatment, the infant should take the milk of a goat which had been similarly rubbed with mercurial ointment.

We have thus compressed into a few pages the pith of an article extending to nearly sixty, and laid before our readers a comprehensive view of a class of eruptions second in importance to none, although usually discussed by surgical writers, under whose care they fall, in an unsatisfactory and superficial manner. On turning to the various surgical lectures, published by the weekly medical journals, and professing to be verbatim reports of these productions of the most celebrated lecturers of the day, it will be found that the descriptions and treatment of venereal eruptions occupy but two or three pages, and that the only diagnostic marks given are the copper colour, the form of the ulcers, and the concomitant symptoms: it cannot be that the teachers are not fully aware of the importance of the diagnosis of these eruptions; but from having been in the daily habit, in hospital practice, of seeing large numbers of cases themselves, they are able, at the first glance, to decide on the nature of the disease; and forgetting that this "visus eruditus" was not intuitive, they consider that what is so evident to themselves must be as clear to others, who have not had the same means of obtaining information. The French, in general, run into the opposite extreme; and, either from giving their pupils no credit for observation or judgment, or from their finding it impossible to keep to themselves any information they may possess, their clinical lectures and books too often abound in elaborate descriptions of the most trivial matters. Roux was struck with the difference, which every one must have observed, in the modes of communicating instruction in the two countries; and he has dexterously excused the national vanity of his own nation by quoting the declaration of Seneca, that he would consent to know nothing if his knowledge was to be for himself alone, if he were forbidden to communicate it to others, to prove that the failing is at least *classical.* We are glad to find that the articles on cutaneous diseases in the Cyclopædia of Medicine, which have been confided to the able hands of Dr. Todd, are likely to supply, in some measure, the deficiencies of the works of Bateman and Plumbe in this class of diseases. He has judiciously determined to follow up the arrangement which both Willan and Bateman evidently intended to have pursued, in classing the various syphilitic eruptions according to their external characters, and not confounding them together in one group. Dr. Todd, in the article "Acne," gives as a strong reason for this proceeding, that although certain forms of cutaneous disease appear essential to syphilis, yet the greater number of those described as syphilitic depend on the constitutional predisposition of the individual, modified by the syphilitic virus; and that "if lichen, lepra, or any other cutaneous disease, makes its appearance in persons tainted with the venereal poison, these diseases, though originating in ordinary causes, will suffer a relative modification." We suspect that this is rather a pathological speculation than the result of actual experience. How frequently is itch complicated with chancres, buboes and venereal eruptions, and yet it suffers no modifications, but yields as readily to sulphur as the most simple case. We recollect to have seen, in the Hôpital des Vénériens, a young man who was affected with both psoriasis guttata and the scaly syphilitic eruption; the former most abundant on the legs, the latter on the trunk, the smooth, polished, coppery, syphilitic eruptions having on their surfaces small, white exfoliations, contrasted in the most marked manner with the redder, rougher, and cracked surface of the psoriasis, with its thicker scales. The psoriasis g. was of some years' standing, but its appearance was not in the least modified by the syphilitic taint. Our authors mention that they have seen many times both herpes and eczema complicated with venereal eruptions. Since the opinion of Hunter and Abernethy, that true syphilis cannot be cured except by mercury, has been completely disproved by the extensive experiments of Mr. Rose, we know of no test by which Dr. Todd can prove the existence of "certain forms of cutaneous disease essential and peculiar to syphilis," distinguishing them from those generally described as syphilitic.

PURPURA.

M. Biett has judiciously, in this instance, departed from the classification of Willan, who placed this eruption under the order "EXANTHEMATÆ;" for the exanthematous eruptions are produced by inflammation and injection of the cutaneous vessels; whereas, in purpura, there is neither inflammation nor injection of these vessels, but an effusion of blood in the superficial layers of the dermis.

Purpura Simplex. M. Biett has found that in those cases in which, from the constitutional debility of the patient, tonics are indicated, benefit has been derived from hot alcoholic fumigations to the part; their temperature should not be elevated beyond 104° to 110° Fahrnheit.

P. Hæmorrhagica. Nothing is added here to the excellent description which Bateman has given of this species, nor have our authors at all cleared the obscurity of its etiology. In the examinations of the bodies of those who have died of this disease, the purple spots and the ecchymoses are found to be formed by effusions of blood in the cutaneous and subcutaneous tissues; these are easily washed off, and no increased vascularity at these parts can be detected. Similar effusions are frequent beneath the mucous membrane of the mouth, pharynx, stomach and intestines—more rarely beneath the peritoneum and pleura; they have been found beneath the pericardium, on the surface of the heart. Generally there are effusions of blood into the tissue of the lungs, constituting pulmonary apoplexy. In some cases, there are partial effusions in the muscles and in the viscera. In a fatal case which occurred in the Hôpital St. Louis, there were effusions of blood in the brain, lungs, liver, spleen, kidneys, in fact in almost all the organs.

Although the general debility which accompanies this eruption would appear to require tonics, wine, full diet, &c. yet this treatment has not been found to succeed, unless in the aged or with children, or with those who have been debilitated by bad nourishment or excessive fatigue. M. Biett has found that the most successful treatment, even in the severe cases, consists in giving the patients acidulated and laxative drinks; with some, he has employed with advantage the extract of rhatany, with ice. The patient should breathe a pure air, and live in a dry and open situation; his diet should be mild, composed of animal jellies, and a small quantity of roasted white meats, with good light wine, diluted with water and iced.

ELEPHANTIASIS OF THE ARABS.

This, which has been confounded with elephantiasis of the Greeks, a tubercular disease which we have before mentioned, is characterized by a tumefaction of the skin, and of the subjacent adipose and cellular tissue, hard and permanent, causing frequently a deformity fully justifying the name which is applied to it. From its being endemic in Barbadoes, it has also been called "the Barbadoes leg." It most frequently occupies one of the lower limbs, but it may attack any part of the body. M. Alard, in 1806, published an excellent monograph on this disease, which he attributed to a frequently-recurring erysipelatous inflammation. Generally, it comes on with pain and swelling in the tract of the lymphatic vessels and glands, the skin is attacked with erysipelatous inflammation, the cellular tissue becomes inflamed and tumefied; the constitution often sympathizes; there is fever, thirst, nausea, vomiting, sometimes delirium; these symptoms, with the exception of the slight tumefaction, subside, but frequently recur, leaving after each attack an increase in the enlargement and in the hardness of the part. Thus the disease proceeds until it has produced considerable deformity, and it then may remain stationary for many years. The tumefaction of the limb may be uniform, entirely disguising the natural shape of the part; or it may be unequally enlarged, the different swellings being separated by deep fissures. The tumefaction may gradually extend from the leg to the thigh, and from the forearm to the arm, or it may be confined to the back of the hand or foot; the palms and soles never participate in the tumefaction. The skin sometimes is merely whiter and more resisting; at other times it appears violet, from the enlargement of the subcutaneous veins: but it may be attacked with vesicular inflammation, and become covered by thin, soft, yellowish laminæ, or even harder scales, analogous to those of icthyosis, or by small fungous granulations; finally, there may be fissures or ulcerations, covered by thick yellow crusts. M. Alard has described analogous tumefactions of the skin and cellular tissue covering the neck, chest, abdomen, &c. but these cases are very rare. The penis is more frequently enlarged by this disease; M. Biett has seen one case in which its volume was quadrupled. The teats, in some instances, are so increased in size, that it is necessary to suspend them with bandages passed behind the neck.

Causes. It is neither contagious nor hereditary. It attacks most frequently adults, but may be met with in infancy and old age. It is endemic in the Torrid Zone; it is rare in Europe. We believe that Dr. Graves, of Dublin, first attracted the attention of the profession to the frequency of this disease in Ireland: as physician to the Meath Hospital, he has had many opportunities of watching the progress of this form of elephantiasis, and the results of his observations he has published in the 4th Volume of the Dublin Hospital Reports; the history of the progress of the disease fully confirms the description which we have given; indeed, it is all but a literal translation of that published by Alard, in 1806; but as it is not marked as a quotation, we presume that Dr. Graves was unacquainted with the work. From inquiries which he caused to be made in the South of Ireland, he found that the disease was by no means rare there; that men, women, and children are all subject to its attacks, and that some have laboured under it from infancy to extreme old age; it is also comparatively very frequent in the Dublin Hospitals. Dr. Graves describes no other form than that attacking the upper and lower extremities. Considerable enlargement of the labia majora, from this affection, is not unfrequently seen affecting prostitutes; and we recollect a woman who went the tour of the London Hospitals, with enormous, hard tumefaction of the skin and cellular tissue of the perineum, verge of the anus and lower part of the nates, resembling in every particular this affection. Our authors allude to the prodigious enlargement of the teats from elephantiasis in some rare cases. If Juvenal, in the following lines, alludes to this affection, it must have been as common an endemic in a city in Ethiopia, as goitre in Switzerland,

> Quis tumidum guttur miratur in Alpibus? Aut quis
> In Meroë crasso majorem infante mamillam?—Satire 13th.

From the pathological researches of Chevalier, Andral, and Bouillaud, it appears that the epidermis is very thick and adherent; the rete mucosum distinct, and can be separated into several layers; the papillæ elongated and enlarged; the corion so much hypertrophied, that in some cases it is half an inch in thickness; the cellular tissue considerably developed, sometimes containing a gelatinous fluid, but more frequently of almost a scirrhous hardness, being more dense the nearer it is to the skin; the muscles pale, softened, and thin; in some cases the veins are obliterated.

Treatment. During the inflammatory stage, the antiphlogistic treatment is to be pursued—either general bleeding, or leeches to the neighbourhood of the inflamed lymphatics. In the chronic stage, general and local bleeding, scarifications, blisters, the cautery, and mercurials, have been tried, but without success. The remedies which appear to have produced the greatest impression in this disease, in the Hôpital St. Louis, are compression, friction, and vapour douches. Gradual and equal compression of the whole limb should be made by a roller, three or four fingers' breadth in width; this either rapidly diminishes the tumefaction, or facilitates the action of other remedies; frictions should be made, with an ointment composed of half a drachm of hydriodate of potash and an ounce of lard; this should be omitted the moment there is any appearance of inflammation. Vapour douches should be directed against the tumefied parts for a quarter of an hour daily. If the skin is inflamed, or covered with vesicles, emollient applications and warm baths must be substituted.

Disease of the Sebaceous Follicles.

M. Biett has frequently observed, in his wards, an inflammatory state of the sebaceous follicles of the skin, sometimes attended with an increased exhalation of the unctuous fluid, and at other times by a marked alteration in its quality, as well as quantity. The follicles of the face are most frequently affected, but the whole system may be inflamed. At first there is merely increased secretion, giving the parts an oily appearance, without changing the colour of the skin; this secretion augments in quantity and thickness, and eventually forms a scaly lamina, which is soft and easily removed; this gradually becomes harder and more adherent, the skin beneath it is red, and, on examination with a lens, the openings of the sebaceous glands appear dilated, and sometimes obstructed by the hardened secretion. This layer may be detached by profuse perspiration, or it may remain for months, growing dry and black. This inflammation rarely extends to the other tissues of the skin; in some rare cases, the secretion has the appearance of the sero-purulent fluid contained in the vesicles of eczema. This inflammation may remain some weeks, or even years.

Causes. It is confined to youth and adult age, and to those whose skin is naturally white, thin, and unctuous; it has never been observed in infancy or old age. Young and lymphatic women are sometimes the subjects of this affection after parturition. Exposure to a cold wind has produced it.

Diagnosis. If the inflamed follicles are numerous, and spread over a considerable extent of surface, and the hardened secretion forms a thick, blackish layer, so divided as to appear like a mass of imbricated scales, it may be taken for icthyosis; but, in this latter affection, the scales are deeply implanted in the skin by one of their borders; they are dry, very adherent, and, in order to be detached, must be plucked out; this is never the case with the scales produced by the hardened secretion of the inflamed sebaceous follicles.

Treatment. When the inflammation is circumscribed, M. Biett has found that it would yield, in a few weeks, to the vapour douches, directed on the diseased surface for 15 or 20 minutes daily, and to the employment of narcotic lotions, succeeded by astringent washes, containing alum, or the vegetable acids. Mild purgatives may be employed when there are no symptoms of gastro-intestinal irritation, which is often the case when the inflammation of these follicles occupies a large surface of the skin; when this occurs, the layers are to be detached by mucilaginous or gelatinous baths and gentle friction—subsequently, alkaline baths, with slightly stimulating applications and vapour-baths. The diet should be mild.

KELOIDE.

This was first described by Alibert under the name of cancroide. Bateman, who had never seen it, doubted its existence; but M. Biett has had several cases which have confirmed the accuracy of Alibert's description.

Kéloide commences by slight tumefactions of the skin; these increase in size, and form small flattened tumours, generally of an oval form, with a slight central depression; at other times they are elongated and angular; the epidermis covering them appears thinned and slightly wrinkled, like the cicatrix of a deep burn; the tumours are hard and resisting; their colour is sometimes a deep red, at others of a pale rose tint, changing according to the temperature, and in women at the period of menstruation; they project one or two lines above the level of the surrounding skin, their circumference being more elevated than their centre; they may increase to an inch and a half to two inches in diameter, or not exceed a few lines. M. Biett has seen a young woman who had eight of these tumours in her neck and anterior part of the chest. In some cases there is deep and lancinating pain, especially after eating, or during atmospheric changes, but this is not invariable; some are never attended with pain. The progress of kéloide is slow—it very rarely, if ever, terminates in ulceration; in some cases it becomes absorbed, and a white and firm cicatrix remains. It has been most frequently observed on the anterior part of the chest, sometimes on the neck and arms.

Causes. Owing to the few cases which have been observed its etiology is obscure. In some the tumours formed without either local or general derangement, in other instances they followed an injury. It has generally been observed in young persons, never in infants.

Diagnosis. Kéloide should be carefully distinguished from a cancerous affection of the skin; the latter is known by its prominent, round, and violet tubercles ulcerating at the summit, and surrounded by dilated veins;

the neighbouring glands are tumefied, whilst the tumours of kéloide, which are generally situated on the anterior part of the chest, are prominent, flattened, with elevated borders, and generally covered with healthy skin.

Prognosis. It is never a serious disease; generally the subjects of it have been in excellent health.

Treatment. Extirpation and cauterization are not advisable. Sulphur douches sometimes have softened the tumours. Probably frictions with an ointment containing hydriodate of potash would be found advantageous.

We cannot close this article without recommending the work which we have analyzed, as a valuable companion to Bateman's Synopsis. M. Biett, whose clinical lectures form the ground-work of this compilation, adopted the classification of Willan, instead of the more superficial system of Alibert, from a conviction of its excellence; this conviction has increased with his experience, and although he has added facts, and has thrown considerable light on diagnosis, he has not found it necessary, except in the most trifling details, to alter the clear and accurate arrangement of our countryman. This testimony, from a foreigner, and particularly from a physician of M. Biett's talents, and ample experience in favour of the classification of Willan, is of the highest value. Unless a clear knowledge is obtained of the various forms which cutaneous diseases assume, often so similar in appearance, but so dissimilar in the remedies which they require for their cure, no definite rules for treatment can be applied. That the acquisition of this information is materially assisted by an accurate classification is evident from the imperfect acquaintance we possessed with these diseases prior to the time of Willan, and pathologists must award due praise to those who further this object. The English students who have attended M. Biett's practice and his clinical lectures, and have experienced the uniform kindness with which he receives the numerous foreigners, of all nations, who crowd his wards, will bear willing evidence, not only to his minute acquaintance with every form of cutaneous disease, but to his skill in applying remedies, and to the success which follows them.

VI.

AN ESSAY ON EPIDEMIC CHOLERA. By *John Webster*, M.D.

In this cheap and portable little volume is concentrated a great mass of information respecting the present epidemic. Dr. Webster took an active part in the investigation of the disease during its first visitation in this metropolis, and, therefore, his observations are entitled to great respect. He has all along maintained liberal opinions respecting the propagation of the epidemic, and has taken great pains to compare it with former diseases, and to investigate its supposed contagious characters. We can only introduce a short extract as a sample of the work; and that will be best selected from a long and able chapter, entitled "REFERENCES to ENGLISH MEDICAL AUTHORS." Dr. Webster, in a preceding chapter, examines the ancient writers, and also those of the Continent, after which he comes to the English authorities. This chapter, as, indeed, the whole work, evinces considerable research and patient investigation.

"Ancient records, of epidemical diseases, prevailing in England, during the early ages, are so meagre in the detail of symptoms, that it is almost impossible to ascertain them with any accuracy; as for instance, it is difficult, if not impracticable, to find out the prominent features, distinguishing the pestilence of 1348, already mentioned, as having prevailed in London, and where 100,000 people died from the disease; it having committed besides, great ravages in Europe and in Asia. In this latter part of the world, so great was the devastation, that priests, physicians, and all classes of society, perished; nay, the very birds of the air also died; and the living were scarcely able to bury the dead. This visitation of so mortal a disease, is considered, both by some English, and foreign authorities, notwithstanding the imperfect information possessed, to have been the cholera. Had the same minute description of the phenomena, characterizing the disease, the collateral circumstances accompanying, and the pathological changes supervening, in those cases, proving fatal, been but handed down to posterity, in the same accurate manner, as future ages will obtain from the present generation, relative to the more modern epidemick; then, little or no difficulty would have existed, fully to establish the similarity of this, or any other ancient pestilential visitation, with that of more recent occurrence. Unfortunately, such facilities do not exist, and, therefore, we can only conjecture, what were the symptoms, from the few imperfect records remaining.

But these doubts do not apply, excepting to the most ancient medical writers of this country; for the more modern, and in a most eminent degree, the accurate Sydenham, cannot be herein comprehended. This celebrated author, contains in his works, a description of cholera morbus, which by most physicians in this country, has been more frequently referred to, than any other, during the cholera controversy. The description, like that of all other diseases, coming under the notice of Sydenham, is clear, distinct, and not to be misunderstood; and as the complaint, of which he treats, was of more frequent occurrence, and more fatal in its consequences, during the period he lived in, than it had been for some time before, or has since appeared, until the present prevailing complaint; it may be considered, as constituting a similar disease, to the one he describes; whilst many readily include them both, under the same classification.

This cholera morbus, we are told by Sydenham, was more epidemic in the year 1669, than he had ever remembered to have known it, at any other period; generally coming on, about the close of Summer, or towards the beginning of Autumn; as constantly, he observes, as swallows in the beginning of Spring, and cuckoos towards Midsummer. There is also an indisposition, caused by a surfeit, according to Sydenham; which happens at any time of the year, resembling with respect to its symptoms, the cholera morbus, yielding to the same treatment as it does, but its species, he observes, is yet different. The true cholera morbus is, however, according to this accurate author, easily known, by the following symptoms. 'Immoderate vomiting, and a discharge of *vitiated* humours by stool, with great difficulty and pain; violent pain and distension of the abdomen, and intestines; heartburn, thirst, quick pulse, heat and anxiety; with frequently, a small and irregular pulse; great nausea, and sometimes colliquative sweats; contraction of the limbs, fainting, coldness of the extremities; and other like symptoms, greatly terrifying the attendants, and which often destroy the patient in twenty-four hours.'

At the close of the Summer of 1676, the same cholera morbus, we are likewise informed by Sydenham's account, 'raged epidemically, and being rendered more severe by the extraordinary heat of the season, was accompanied with more violent and inveterate symptomatic convulsions, than he had ever before observed. For, not only, the abdomen, as is usual in this disease, but all the muscles of the body, and especially, those of the arms and legs, were affected, with terrible spasms, so that, the patient would sometimes leap out of bed, and extend his body different ways, in order, if possible, to mitigate their violence. To exemplify these observations, Sydenham describes a case of a person, to whom he was called at this time, along with his intimate friend, Dr. Goodal. This patient, Sydenham states, was reduced to the last extremity, by the symptoms above mentioned, as characterizing the cholera morbus; attended 'with excessive vomiting, cold sweats, and a scarce perceptible pulse.' Cases of the same disease, this author likewise met with, at all seasons of the year.

Feeling anxious to know the degree of mortality, this epidemic cholera morbus exhibited, and which Sydenham mentions, was more extensive and severe, than he had ever before known, a reference was accordingly made, to the bills of mortality for the year 1669; but no death whatever, is reported in these documents, under the name of cholera morbus. Indeed, it should as well now be stated, that this appellation, so commonly used, in the works of Sydenham, and of most other medical authors, was not adopted, in the bills of mortality, for more than a hundred years afterwards; nor is it found in any preceding register. However under the head of 'Gripings in the Guts,' some years previously designated 'Plague in the Guts;' there are entered, in the burials within the bills of mortality, during the year alluded to, of 1669, the very large number of 4,385, as dying of this complaint; undoubtedly the vulgar name, for the more scientific one, of cholera morbus, as used by Sydenham, And this in a population of not much more than 600,000, constitutes a very considerable mortality, for one disease. During the following year, or 1670, it is reported 3,690 likewise died of the same disease. The number of deaths, by this complaint, afterwards gradually fell off, and at the beginning of last century, when the population of London amounted to 674,000, they were of a very small amount; and in 1758, only fifty are reported to have died of this malady, so extensively fatal in the time of Sydenham.

The next authority referred to, on this question, is Morton, considered the ablest physician, and most learned member in the medical profession of his day, and a worthy successor of Sydenham; he flourished at the end of the seventeenth century. In one of this author's works, published in 1693, we find the following general outline, of the symptoms, characterizing the cholera morbus, of that period. In this disease, he observes, 'There are present enormous vomitings, and dejection of corrupted humours, from the bowels, with great difficulty and suffering; vehement pain of the stomach and intestines, cardialgia, thirst; pulse quick, frequent, small, and unequal; there is also heat and anxiety, most insupportable nausea, sweat, contractions of the legs and arms, fainting, or deliquium, the extremities are frigid, with similar symptoms, which kill in twenty-four hours.'

But perhaps, the most valuable information, we can obtain, from the classical works of this experienced physician, as they may well be called, being written in excellent Latin, is the detail of some cases, occurring in his own practice, about the time already stated. Particular instances are much more important, than any general description, as that may be derived from the writings, or observations of others; but here, actual cases speak for themselves; and they constitute facts, the most stubborn, whilst they establish points in the discussion the most important, and which reasoning or sophistry, never can explain away, or overcome.

However, before quoting these instructive cases, it will be useful, and may serve to elucidate the subject, if a short digression be allowed, from the point more immediately under consideration, in order to observe, that Morton, when describing the intermittent fever, of his time, says: 'this disease sometimes assumes the type of cholera morbus.' In another paragraph he remarks, 'When the poison,' meaning of intermittent fever, 'participates at the same time of an emetic and cathartic nature, the patient is affected with frequent vomiting and purging, from whence cholera morbus is formed! Again, in another page, we find this instructive, and most important observation. 'If from the poison,' that is also as regards intermittent fever, 'attacking at the same moment both the stomach and intestines, and from these parts producing a discharge of colliquative humours; there is then observed enormous vomitings and dejections, along with horrible spasms; the same as occur in cholera morbus.'

The first case, thought advantageous, here to quote, is the one marked number four, in Morton's publication relating to proteiform diseases. The patient was a servant to a druggist, named Hall, living at Pye Corner, and it is dated the 4th of May, 1691. 'Three hours after dinner, this person was taken suddenly ill, with most painful spasms of the intestines, and enormous vomiting, of different coloured bilious matters, which continued that night, with hiccup, and spasms of the stomach. The diarrhœa remained, accompanied with horrible spasms of the whole abdomen; latterly, the tormina of the intestines and stomach were most violent, and the vomited matter consisted of a porreaceous, blackish, thin liquor, accompanied with constant hiccup and nausea.' This patient recovered, notwithstanding the violence of his symptoms by the treatment Morton recommended.

The next is that of a young girl, aged 16, previouslyin good health, of elegant appearance, and very clever, as the Doctor expresses. She was taken ill on the 28th of May, and seen by the author in consultation, on the 30th. She lived in Paternoster Row, was named Thatcher, and is the seventh case reported. When visited, this patient was found to be overcome with incessant vomiting, and she was crying out from the horrible spasms she felt in the thorax and abdomen; and appeared as if about being suffocated. Notwithstanding the violence of these symptoms, there was scarcely any fever, the urine was clear and thin, but nothing is said of its smell. The temperature of the body was low, the extremities were cold, the pulse weak, quick, and irregular. Next day, the symptoms were even more violent, the young lady was almost suffocated, and delirious, from the severe and excruciating pains in the thorax and abdomen; she threw herself about in the bed, constantly vociferated, and the vomiting continued. This individual likewise ultimately recovered.

It has been remarked, Morton frequently observed cholera morbus to accompany paroxysms of intermittent fever, and many cases in support of this opinion are stated in his work relating to that disease. The example, which may at present be mentioned, is the eighth case; namely, that of Mr. Arvis. This individual, after returning from the country to London, was suddenly seized with the most acute cholera morbus, according to the author's account, very early in the morning, he having been called up to visit the patient. Morton found him affected with vehement spasms and evacuations, both upwards and downwards, so that the life of the sufferer was in the greatest danger. The extremities were cold, the pulse weak, quick, and almost extinguished, there was deliquium, whilst the other symptoms were most severe.

Notwithstanding the remarkable cases already quoted, from the writings of Morton, a feeling may perhaps continue to linger, in the minds of readers, indicative of doubt, as to the similarity they may exhibit to those of more modern epidemics. Evidence should of course be always of the clearest and strongest kind, to produce conviction: for where an opinion is hastily formed, or upon slight evidence, it is generally erroneous. To those still sceptical, perhaps, the following extraordinary, and precisely similar history of a case, to more modern occurrences, may assist in directing their judgment, to arrive at a correct conclusion. The subject of it was Mr. Ambler, living at Mile End, a valetudinarian, of spare habit of body, and upwards of fifty years old. It is the first case rereported, in Morton's 'Exercitationes de Morbis Universalibus Acutis;' published in 1692.

This individual having one day, during rainy weather, in 1690, sailed a long time on the Thames, was, on his return home, suddenly seized with rigour and horror, to which an unusual feeling of coldness succeeded; during the continuance of these symptoms, the vibrations of the pulse could scarcely be felt. He was affected copiously with vomiting, dejections, and horrible oppression of the stomach, and was attacked as in cholera morbus. The apothecary in attendance attempted to resuscitate the vital spark, almost extinguished, before Morton was called in to consultation. Next morning, he was visited by Morton, and he reports, 'the patient exhibited a complete and well-marked hippocratic countenance, the whole body was cold like a piece of stone (glebæ), and covered with sweat; the *skin*, from the coagulation of the blood, was tinged with a blackish, or (nigredine) swarthy colour; the strength was almost exhausted by his sufferings, and the perpetual evacuation of variously coloured bile by the mouth, and of a fetid whitish (albescentis) liquid like cream per anum. Every symptom indicated approaching death, since the vital principle, or the animal spirits, appeared to be so greatly depressed by the poison! By the aid of medicine, the strength of the pulse was a good deal restored; the blackish colour of the skin began to vanish, and the heat of the extremities to return. (Pulsûs robur, plurimum restitutum sensi, nigredinem cutis evanescentem, calorem in extremis partibus redintegraturam.) Nevertheless, all the symptoms soon re-appeared again, with greater intensity than before; and 'the miserable patient expired, within twenty-fours from the time the disease first commenced.'" 139.

We strongly recommend this interesting little volume to the attention of our readers.

VII.

OUTLINES OF MEDICAL BOTANY, comprising Vegetable Anatomy and Physiology, the Characters and Properties of the Natural Orders of Plants, an Explanation of the Linnæan System of Classification, and Tables of Medicinal Plants, arranged in their Linnæan and Natural Orders. By *Hugo Reid*, Member of the Royal Physical Society and of the Society of Arts, Extraordinary Member, and lately President, of the Hunterian Medical Society of Edinburgh. 12mo, pp. 390. Edinburgh, 1832.

AT all times, but especially in the present season of the year, when Nature is clothed in her loveliest garb, and invites the most thoughtless and ignorant to the contemplation of her treasures, it is our delight to study Botany; to leave for a time the filth of the dissecting room, the closeness of the laboratory, or the fatigues of actual practice, and roam at liberty over hill and dale, admiring the beauties and wonders of the vegetable world, gathering the choicest specimens, and afterwards carefully preparing them for the herbarium. Were the medical profession sufficiently impressed with the interest, and, we may add, importance of botanical science; could every young member of it, before he engages in the turmoils and anxieties of busy life, taste of the pleasing delights which its votaries enjoy, and could they, while yet at the lecture-room, foresee the varied situations in which they might afterwards be placed, situations in which the medical man is continually made the referee upon any dispute, or regarded as the expounder of any difficulty, we doubt not that much more attention would be paid to the acquisition of the knowledge of plants than has hitherto been; and no argument or persuasion be necessary to prompt and stimulate him to its study and pursuit.

We are well aware that a very common opinion prevailing is that this department of natural history is trifling and unimportant; that the objects of its research, though beautiful, are to a very limited extent of much utility, especially in the present day, when we have a sufficient number of officinal herbs, if we only knew how to use them; that the details of classification and arrangement are most absurdly tedious and perplexing, and require so much time, as to withdraw the attention from objects of more direct practical consequence. That difficulties must be encountered, and overcome; that uncertainties not unfrequently arise, and that very considerable leisure and patience must be devoted to the study, at least when it is first entered upon, we do not deny; but these are objections, if objections they can be called, not peculiar to botany, but to every branch of science; the threshhold is seldom very inviting; the steps which lead up to the porch may be many and wearisome to mount, and when we reach the vestibule we may feel ourselves lost, as it were, in the amazing extent, and vast dominions of the temple; but every advance we make will render our future efforts more easy, and what would have been fatiguing at first, will soon be felt as light and pleasant; for we gain strength as we go on, and the capacities of our minds become more exalted and amplified. We doubt not but that the mighty mind of Linnæus, when engaged in his great enterprise of classifying the infinitude of Nature's works, was much less oppressed with his labours than the young student when he first endeavours to ascertain the genus of a plant. But we shall revert to this subject, and shew that botany, if properly studied, is of all sciences one of the most easy of acquisition, as well as one of the most delightful in its rewards; and in the mean time we shall take our stand in defence of this favourite pursuit on a different and more worthy ground, and we shall appeal to the better and more generous principles of youthful aspirants to medical fame; we shall view the subject, not merely in regard to the difficulties which may attend its acquisition, or to the immediate and visibly obvious importance of its details, but as it is calculated to improve, and embellish the minds of our professional brethren. For, alas! in the present day, and especially in this great metropolis, the name and character of a surgeon and physician are sadly degraded; too often are they associated with the ideas of chicanery, and subserviency; and little wonder is it when we consider that such a large portion are on a level with petty traders, and sneaking shop-keepers. Medicine is not followed as a science, but as an occupation; and the hopes and wishes of its votaries are limited to the base and illiberal calculations of profit and of gain. As long as the present system of medical practice exists, we can hope for little improvement; and we are not of such Utopian extravagance, as to imagine that we can in any measure effect a change in the present old established generation of medical men, but we are anxious to contribute our support to the bringing in of a better state of things, when our profession will be studied and pursued as a branch of useful science, and as the channel of the choicest blessings of benevolence and sensibility. It must be divorced from all connexion of traffic and trade; its members, if they have any spark of gentlemanly feeling, must separate themselves from any such unions as that of compounding and dispensing, and retailing drugs; they must have a pride above such humble, and lowly occupations; and their thoughts must be directed to the acquisition of liberal knowledge, and to the diffusion of its blessings to those around them. Now we do not know a better method to effect this, than to inspire every young medical man with a taste for some of the branches of natural history, which, independent of its many direct associations with medicine in the departments of comparative anatomy, materia medica, and toxicology, cannot fail to imbue the minds of its students with a love of science, for science's sake; and if one department is more inviting than another, that one we think is botany.

There is a healthfulness, and gaiety of body and of spirits in its pursuit; its objects are so wonderfully beautiful and curious, and the facility of preserving them is so pleasing, that apart from their utility and importance in husbandry, gardening, and medicine, it appears to us that they only require to be known, to excite a zeal and enthusiasm in their favor. What can be more interesting, and also more worthy of an intelligent mind, than to find amusement and instruction in every walk? what more soothing and quieting to the feelings, after the vexatious annoyances and disappointments of a day's labour, than to contemplate Nature in its gentlest and fairest forms? Those, indeed, who are immersed in the walls of a large city are in a great measure shut out from such pursuits; but even they have opportunities of visiting gardens, and hot-houses, and conservatories; and with an herbarium at home, they can almost live over again those happy days when they were engaged in collecting its specimens. How few, however, of the medical republic are these, in comparison with the sojourners in the country, or the wanderers by sea and land in foreign climates; and we know from our own experience what a rich and constant theme of pleasure and delight botany may become to them. He who has visited the shores of a tropical climate, and has gazed on the wonders of tropical vegetation, and yet has not felt within him a wish to hold, as it were, converse with the mute beings which surround him, in all their luxuriance of beauty, and gorgeousness of profusion, must have a soul dead to every love of science, and is not worthy of being her votary, in the career of a liberal and ennobling profession.

We will not deny that such a man may be a useful practical surgeon, or physician; he may be able to amputate a limb, or dress a sore, or prescribe for an inflammation as well, and as expert as he who adds a taste for botany, or zoology, or mineralogy, to his professional acquirements; but the reverse of the position is equally true, and will not we hope be disputed; we mean, that the student of science and lover of Nature may be as thoroughly acquainted with the details of practice, and as intimately conversant with the duties of the hospital, or sick-room, as he who limits his ideas within such a sphere; and we shall go a step further, and boldly assert that almost all the great improvements in physic and surgery have emanated from scientific men. Where can you find a better physician than the accomplished Mead; or what name is worthy of being joined with Hunter's?

It is not so much from the mere acquisition of the facts of knowledge; it is not only from being able to tell all the minutiæ of animal structure, from the anatomy of man to that of the simplest worm; or to recognise and name every plant from the lofty palm to the microscopic moss, that he whose mind is thus enlightened has a higher chance of adorning and improving his profession; what is more important is that besides having a well-stored memory, he has been accustomed to habits of patient and assiduous research; he has been taught to examine facts and objects for himself, to compare them together, to note in what they resemble, and in what they differ from each other, and thus he acquires that sifting frame of mind which is so well calculated to observe the phenomena of health and disease, to discard all prejudices, and all opinions which are not substantiated by an appeal to experiment and observation, and to base the general rules of his practice on a most cautious and severe induction. We cannot, therefore, too earnestly recommend, as an accessory or collateral branch of knowledge of high importance, botany in its various details. Naval and military surgeons have frequently much spare time, and placed as they are so frequently in situations most favourable to the prosecution of the study, that leisure might be thus most agreeably and usefully employed, and the character of the medical profession be most materially exalted and respected. We shall not urge this topic any further; but shall now briefly explain the manner in which a competent knowledge of plants may be easily obtained. The ordinary routine of attending a course of lectures, and of a few specimens being put into the hands of the student in illustration of these, will avail little; it will enable the student to discourse sufficiently on opinions and theories; to understand the teasing vocabulary of names, and even to ascertain a few prominent facts, such as the class and order of a specimen, provided the flower be present; but such knowledge, disjoined from a practical acquaintance with plants in their native localities, is only ornamental, and savours often too of book pedantry. A week or two's reading in the closet will be sufficient for this part of the subject; but it is only in the fields, and from Nature's own book, that we can expect to become botanists. With our box slung across the shoulders, and our Compendium in our hands, we must start with as much glee as the huntsman for the chase. But ours is the more exalted, and in course of time becomes by far the more agreeable sport; ours is not to inflict pain, or to murder feeling life, but to search after, and to look into the choicest and sweetest productions of the Creator's hand.

There is altogether a something so cheerful, so soothing, and calm and intellectual in the study of the external world, so well fitted to withdraw the mind from the tumult of passions, from the corrosion of cares, to exalt it above the lust of money and of wealth, to inspire it with a love of knowledge for the sake of knowledge herself, and thus to throw, as it were, around it, an intellectual mantle, that he is little to be envied, who, although surrounded with affluence and power, is shut out from such high enjoyments by wilfulness or by ignorance. Let us consider too, how easily and how agreeably are such enjoyments purchased; the very pursuit of them is full of health-giving spirits, and so abundant are they that all may be satisfied, and yet no satiety be felt by any: we have only to wish to possess them, and to add to that wish a little willingness for exertion, and soon we may acquire a considerable knowledge of practical botany. As the difficulties which the young student encounters at first, from the immense vocabulary of designating words—from the inapplicability of many of these—from the unsteady characters of some plants, depending upon age, locality, and so forth, we consider by far the best plan of teaching botany to be, what may sufficiently appositely be termed the Hamiltonian system; the principle of which is to introduce the pupil at once into the "medias res," and to convey the knowledge of the grammar and philosophy of the science to him as he proceeds: thus every plant which he collects is interesting and instructive, not only as an addition to his herbarium, but as the type of a term of nomenclature, or an illustration of a physiological truth. Our advice to our young medical brethren is at once to betake themselves to the practice of botany, under the guidance of an experienced teacher, who will accompany them in their journeys and excursions: we know the advantages of this method from our own experience, and have much pleasure in availing ourselves of the present opportunity of recommending to the alumni of the Edinburgh Alma Mater, the name of Mr. Lloyd, author of botanical terminology, a work well calculated to explain the numerous terms which are used in the description of plants.

After these preliminary observations, we shall proceed rapidly to review the work before us, which is highly creditable to our young friend, and calculated we think soon to supersede Smith's Elements, or any other manual on the subject. We have carefully examined Mr. Reid's Outlines, and cordially approve of them; indeed it is decidedly the best introductory book upon the subject. The descriptions are clearly and concisely detailed, and very well illustrated by neat wood-cuts, introduced separately into the pages instead of being collected together at the end of the volume. This is by far the better plan, as we thus have the benefit of the verbal and pictorial delineations at the same time. The work consists of two parts; the one devoted to an account of the general and special anatomy and physiology of plants; the other to the arrangement, or classification of them. We are tempted to select a few quotations to shew the matter and manner of the contents.

"The only phenomena in the physiology of plants which have any appearance of being connected with a nervous system are those which are more correctly said to be caused by their irritability. Examples of this property in plants are within every one's observation. The turning of leaves and flowers to the light, even though repeatedly put out of their natural position, and the opening and closing of flowers, are well known. The stamens of the Rock-rose *(Helienthemum)* and of the Barberry *(Berberis)* possess the peculiar property of bending when irritated by any sharp body. The leaves of the *Hedysarum gyrans*, a plant found in India, are almost constantly in a state of motion. The leaf of the *Dionea muscipula* (Venus' Fly-trap) is provided with bristles, and, when irritated by an insect, it becomes folded and crushes the animal. The most remarkable instance of irritability in vegetables is afforded by the sensitive plant *(Mimosa pudica)*; when touched or agitated by the wind, the leaflets become erect, and closely applied to each other and to the stalk, but they gradually resume their original position when the stimulus is withdrawn. Besides these, there are many other instances which it would be unnecessary to enumerate here: indeed, it is not improbable that it is by a kind of irritability, or contractile power, that the rootlets are enabled to absorb the juices, and the vessels to propel their contents. It has also been lately ascertained that vegetables are acted on by those poisons which are supposed to affect animals through the medium of the nervous system, as hydrocyanic acid. The effect generally was to produce a kind of contractile action, and diminish the sensibility of the plant to the usual stimuli." 8.

The description of the functions of the root is succinctly and cleverly given.

"Thus it will be observed that perennial plants, which live during many seasons, have either a bulb, a tubercle, or a woody subterraneous stem, which preserves the vital principle during the suspension of vegetation, and contains a store of nutritious matter for the early growth of the new plant. A mere bundle of fibres would be unable to survive excessive cold or much moisture, could not contain a store of ready formed vegetable matter, and would not be adapted to convert readily the material drawn from the soil into proper nutritious matter. In every instance of the growth of a new plant, whether an entire plant from a seed, bulb, or bud, or herbage and flowers from a perennial root, there must be a stock of proper food ready for the young plant.

Almost all plants are provided with roots, except several of the lower orders, which, vegetating in water or on its surface, absorb nutritious matter at every point. Some plants which have roots float loosely in water, and are not fixed to any thing, as Duckweed *(Lemna)*. Aquatic plants, however, have generally two roots; one is buried in the earth and fixes the plant; and the other floats freely in the water, as Buckbean *(Menyanthes)*, and Water Lily (*Nymphæa*). The Sea-weed tribe *(Algæa)* are in general fixed to rocks, from which they can draw no nutritious matter.

PARASITICAL plants are those which insert their roots in other plants, and draw from them their nourishment: Broomrape *(Orobanche)*, Dodder (*Cuscuta*), Misseltoe (*Viscum album*).

Branches also possess the property of throwing out rootlets (121.): if a branch be placed in the earth, or surrounded with earth on the tree, an incision being made in the bark, it will emit rootlets from its sides, and become, if properly treated, an entire and independent tree; hence the propagation of plants by slips and by layers. Many of the Grasses, as Indian Corn (*Zea mays*); and the Sugar Cane (*Saccharum officinarum*), emit from the knots on the stem, when these parts are surrounded with moist earth, rootlets capable of producing new plants. In this way the Sugar Cane is propagated." 23.

It is curious to remark the analogy which exists between various parts of a vegetable and the corresponding textures in animals:—read the account given of the functions of the epidermis.

"The cuticle is supposed to protect the parts underneath from the too direct action of air and water, and to prevent too great evaporation of the fluids. It affords little protection from the action of heat or cold, except when covered by a thick hair or wool, as in the Great Mullein. On the trunks of the Fir, the Plane, the Oak, and other trees, the office of the cuticle seems to be performed by dead layers of bark or of herbaceous integument, which are pushed outwards, having performed the functions for which they were made.

In forest trees, and in the larger shrubs, the bodies of which are firm and of a strong texture, it is a part of little importance; but in the reeds, the grasses, canes, and the plants having hollow stalks, it is of great use, and is exceedingly strong; and, by the microscope, seems composed of a kind of glassy network, which is principally siliceous earth. This is the case in Wheat, in the Oat, in different species of Equisetum, and, above all, in the Rattan, the epidermis of which contains a sufficient quantity of flint to give light when struck by steel. The siliceous epidermis serves as a support, protects the bark from the action of insects, and seems to perform a part in the economy of these feeble vegetable tribes, similar to that performed in the animal kingdom by the shell of the crustaceous insects. I have ascertained by experiment that siliceous earth gene-

-rally exists in the epidermis of the hollow plants*.' The Bamboo (*Arundo bambos*) contains much silica, called "tabasheer." 31.

The subject of the nutrition of vegetables is full of most curious and interesting research, from the absorption of the food from the earth and atmosphere through the radicles and leaves, to the perfection of the sap, and the formation of its varied products. We give the following extract as it has reference to an hypothesis of a French philosopher, which has been applied to the explanation of animal, as well as of vegetable physiology.

"The cause of the ascent of the sap is not well ascertained. Some have ascribed it to the influence of heat, others to capillary attraction. It seems to depend upon some principle not connected with the vital properties of plants: it has been found that if a root full of moisture be surrounded with very dry earth, the fluid will pass from the root into the latter; and the known effects of heat would seem to corroborate this opinion. It has been ascribed to a vital irritability in the vessels, to the influence of electricity, and by M. Dutrochet to *Endosmose*. This celebrated physiologist found that mucilaginous fluids have the property of overcoming the power of gravity, and ascending in small tubes with a force capable even of overcoming the pressure of the atmosphere, when in contact with membrane or other organized tissue closing the bottom of the tube; the fluid gradually works its way through the membrane or other tissue, and ascends to a great height in the tube. To this phenomenon he gave the name of Endosmose, and applied it to the explanation of the ascent of the sap vegetables.

The sap, when it arrives at the leaves, is deprived of its watery part by exhalation or evaporation, this being dissolved in the atmosphere when it comes into contact with it. This takes place principally under the influence of light and heat. Hot and dry weather greatly facilitates this operation, as Hales ascertained by experiments on the Sunflower (*Helianthus annuus*), which was found in such weather to transpire thirty ounces daily, being one-half more than its average quantity. The watery part of the sap, having performed its office of dissolving the solid matter necessary for the nutrition of the plant, thus rendering it fit to be absorbed by the spongioles, is discharged as of no further use." 60.

Again, the wonderful process of fecundation and reproduction must arrest the attention of every one. Nowhere is the adaptation of structure to function more beautifully illustrated.

"The pollen is conveyed to the stigma in various ways. In many hermaphrodite plants (206), the stamens are longer than the pistil; and the pollen, when it escapes from the anther, naturally falls on the stigma. In such cases, as Linnæus remarked, the flower is generally erect. When the stamens are shorter than the pistil, the flower frequently hangs downwards or droops, thus still enabling the pollen to fall on the stigma when it escapes. When the stamens are short, and the flower erect, there is frequently a nectary at the bottom of it, which attracts insects in search of honey; these become covered with pollen, which falls from them on the stigma as they fly out. The stamens of many plants are endowed with a certain degree of irritability, by which they are enabled to bend towards the stigma and deposit their pollen, returning afterwards to their usual position.

In monœcious (207) plants, the male flowers are frequently situated on the upper part, so that the pollen falls on the stigma. In these, and in diœcious (207) plants, the wind is perhaps the chief agent in conveying the pollen, which is a light powder, from the male to the female flowers; and butterflies and other insects, which fly from flower to flower, also carry and deposit the pollen. In Persia, the female or fertile Palms chiefly are cultivated, and at the flowering season branches of Wild Palms with male flowers are gathered and shaken over the fertile flowers. This was practised long before the theory of the operation was known.

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* Sir Humphrey Davy's Agricultural Chemistry.

When fecundation has been effected, the stamens and floral envelope, and also the style and stigma, are of no further use. They generally wither and fall off, though occasionally one or more are persistent. The calyx frequently forms a covering for the ovary, as in those cases where the ovary is inferior, as in the apple; the stigma frequently remains as in the Poppy. The ovary, of course, constantly remains and forms the future pericarp or covering of the seed (356), while the ovule becomes the seed." 99.

It is well known that the propagation of plants may be effected in several ways, besides that of placing the seed in the ground, by buds, and bulbs; by layers, runners, slips, and by grafting; akin to some of these processes are the phenomena of reproduction in the lower orders of zoophytes, the different portions of their bodies being capable of constituting perfect and entire animals. The following observations we consider worthy of insertion.

"Plants are propagated by buds in four different ways: 1. by means of the bulbs which grow at the base of the scales in the bulbous root, as in the Snowdrop or Lily; these bulbs are soon detached from the parent bulb, and become independent plants: 2. by means of the bulbils which grow upon the stem in the axilla of the leaves, as in the Coral-root (*Dentaria bulbifera*), and in the Orange Lily (*Lilium bulbiferum*); or in the place of the flowers, as in the Mountain Garlic (*Allium carinatum*): 3. by means of the buds or small bulbs which grow at the margins of the leaves in the *Bryophyllum*, and the Bog Orchis (*Malaxis paludosa*): and 4. by means of the minute buds or eyes found in the tubercles of various plants, as the Potatoe (*Solanum tuberosum*).

All these buds resemble seeds in this, that when detached from the parent, and placed in the earth, they produce new plants. They differ from seeds, in not being formed by sexual organs; in not being able to preserve their vitality for such a length of time; in not having distinct parts, such as radicle, gemmule, and cotyledons, being merely extensions of the substance of the parent; and in always producing the same variety. Hence the advantage of propagating the Potato by buds; we have found a variety well adapted for use as an article of food, and we can ensure its reproduction. If grown from a seed, a very different variety might be produced, which would not have the same nutritious properties.

Alpine Meadow-grass (*Poa alpina*), and Viviparous Alpine Bistort (*Polygonum viviparum*), frequently bear little buds in their spikes. All plants which increase by buds or bulbs produce few seeds, and are called *viviparous*." 120.

And again:—

"These processes for the propagation of plants, are, in many cases, preferred to multiplying by seed. Propagation by slips or layers always produces the same variety as that from which the slip is taken; so that, if we have a plant which produces good fruit, by propagation in either of these modes, several may be raised bearing fruit equally good. The tree is always more speedy in bearing fruit when formed in this way, than when grown from a seed.

It is a remarkable fact, and one which is turned to good account in the cultivation of fruit trees, that, when the tree is raised in this way, the number of seeds in the fruit is almost always less than when produced from a seed, so that more of the juices and strength of the plant are expended in perfecting this fruit. The Vine, when raised by seed, has four seeds in each grape; but frequently only two, when propagated by layers. The Sugar-cane, which is propagated in a nearly similar manner (64), bears no seed at all, but the other parts of the plant are richly developed.

Thus, by a singular control over their mode of growth, which is also exhibited in the case of viviparous plants, vegetables are enabled to adapt the number of seeds to the demand for them—the demand depending on the number of other sources for propagation which they may possess." 122.

The utility of propagating plants by grafting is thus succinctly explained:

"By grafting we are enabled to accelerate considerably the fructification of various trees, improve much the quality of the fruit, and preserve and multiply particular varieties of trees which may be deemed valuable. An Apple-tree does not in general produce fruit till it is ten years of age; but if a scion of a seedling tree be grafted on one that has already borne fruit, it will bear fruit in the third or fourth year. 'Suppose two acorns of a new species of oak received from a distant country; sow both, and after they have grown one or two years, cut one of them over, and graft the part cut off on a common oak of five or six years' growth; the consequence will be, that the whole nourishment of this young tree of five years' growth being directed towards nourishing the scion of one or two years, it will grow much faster, and consequently arrive at perfection much sooner, than its fellow, or its own root left in the ground. A French author found the advantage of this practice, in the case of a new species of ash, to be as five to one in point of height.'—*Loudon's Encyclopædia of Gardening*. The quality of the fruit is improved by the non-development of many of the seeds of grafted plants, which enables them to expend more of their energies in enriching the fruit. By grafting, we can supply a branch of an old tree with a plentiful quantity of sap, more healthy and nourishing than it could get from the tree on which it grew, and thus for a time it is more vigorous, and produces richer fruit. 'As the graft is merely an extension of the parent plant from which the scion came, and not properly speaking a new individual, so it is found to be the best method of propagating approved varieties of fruit-trees, without any danger of altering the quality of the fruit.'—'Till lately, grafting was confined to the ligneous plants, but it is now successfully practised on the roots and shoots of herbaceous vegetables; and the Dahlia is grafted by the root; the Melon on the Gourd; the Love-apple on the Potato; the Cauliflower on the Cabbage, &c. by the shoot."—*Loudon*." 124.

The author next relates the difficult details of vegetable chemistry; but to this part of the subject we have not space to devote. We therefore proceed to the second great division of the work, that of systematic, or rather "systematising" botany, or the science of grouping together, and classifying the productions of this vast field of Nature's bounty. Most of our readers probably know, that in the present day there are two rival methods or systems, the artificial one of Linnæus, and the natural one of Jussieu, improved by Decandalle, Brown, Richard, and others. Both have great merit, and possess different and individual advantages; to compare and contrast them together, we consider absurd and illogical; their authors constructed them with different views, and these views have been in a great measure attained by each. The one is intended to be a sort of dictionary or vocabulary of the vegetable kingdom, wherein we may discover and ascertain any plant presented to our notice, in the same way as we examine a lexicon, or encyclopædia for an explanation of any word, or description of any object or event: such is the character of the Linnæan arrangement, at once so simple, beautiful, and applicable; the most important objection, indeed, to it is, that frequently it is too natural a system; for we find that just in proportion as the natural characters are obvious and distinct, so is the difficulty of distinguishing the genera and species perplexing and vexatious; look to the second order of the fifth class, containing the umbelliform plants; to the cruciform, or tretradynamic; and to the compound or syngynesious flowers, still the Linnæan method appears to us to be not only the best but indeed the only one, calculated to enable the young student to acquire a practical knowledge of botany; when more advanced, then let him begin to group and arrange the plants with which he is already acquainted, by their natural affinities and by their congenerate characters; and in this labour, he will find that Jussieu has effected more than any other author, and that his system is more comprehensive and correct than any previously unfolded. To attempt this, before he is thoroughly conversant with the plants themselves, would be like instructing a child in reading sentences, before he knew the letters, or explaining a mathematical problem to one who is ignorant of lines and angles. The remarks of Mr. Reid are so just and pertinent that we cannot do better than give them in his own words.

"According to the method of Jussieu, plants are grouped together, not because they may agree in the structure or number of any single organ, but because, on taking all their different characters into consideration, they are found to bear a strong resemblance to each other: and we also find that, in general, the properties of plants are similar in those which are like in their external characters. For these reasons, it is generally called the Natural System. An acquaintance with it affords a broad, comprehensive, and scientific view of the vegetable creation; and it embodies much important information regarding the structure, physiology, and properties of plants, and their mutual relations. Though this is the system which it must always be the object of botanical science to perfect, and with which it is necessary for every student of botany to be intimately acquainted; as it has not been found possible to simplify it as much as could be desired, a knowledge of the Linnean System must also be acquired. From its comparative simplicity, it is very convenient for those commencing the study; and, indeed, till within these few years, it alone was followed in this country." 158.

According to the natural system of classification, there are two grand, or primary divisions of plants, namely, into those which have flowers, sexual organs, and a seed provided with an embryo, and into such as are destitute of these organs; the former are denominated phenogamic, or cotyledonous, and the latter cryptogamic, or acotyledonous. The first of these classes is subdivided into two large sections, the monocotyledonous plants, or those which have one cotyledon, or seed-lobe; and the dicotyledonous, or those which have two opposite cotyledons, as in the pea, lupine, &c. &c., or several in a whirl, as in some of the coriferæ.

At this stage of our progress, it is interesting to mark the strongly stamped line of demarcation between these two grand families of plants; we can only allude to one particular, we mean the difference in the structure, or anatomy of their stems. In the monocotyledonous, the stems consist of—

"Bundles of vessels irregularly dispersed through cellular tissue, and covered by a thin cuticle (88). The Sugar-cane (*Saccharum officinarum*), the Lily, the Palm, and the Iris, have this kind of structure, the cellular and vascular tissues being blended together through the entire substance of the stem.

Stems of this kind are called *Endogenous*, because the new matter by which they increase in diameter is added at the centre. Their growth is carried on by means of the thick cluster of leaves by which they are terminated superiorly. From them the new matter descends into the centre of the stem, and pushes outwards the parts first formed. The upper parts of the leaves perish, having performed their functions; their bases remain, are pressed together, and form the new external part of the stem. In the middle of the crown of leaves is the terminal bud, which is next to be developed, to rise a little above the former, become a cluster of leaves, and in its turn be pushed outwards by a succeeding central bud.

The oldest and hardest part of such stems is that nearest to the circumference. The more the external parts are pressed by the descent of the new matter, the more close and compact they become, the outer parts being incapable of being much farther pushed out, and the whole being thus condensed into less bulk.

From the mode of growth in this stem it never can attain a great thickness, the new matter having to force outwards all the previously formed matter, which is every season increasing in quantity and becoming harder. They often, however, attain a very great height, as is seen in Palms, which are occasionally met with nearly 200 feet high.

Stems of this kind are found only in Monocotyledonous plants (406)." 28.

On the other hand, dicotyledonous plants are provided with exogenous stems, or stems in which the wood grows from without by a new layer being formed annually next the bark.

"It is pushed inwards, and becomes more compact by the pressure of each succeeding annual layer, till at last it becomes almost solid, the sides of the vessels and cells being squeezed close together: hence the great hardness of such trees in the centre."

"In exogenous plants, the new matter being added externally, a bark or covering is necessary to protect it, when young and tender, from the action of the atmosphere, and from external injury from other causes: hence an important office of the bark. In endogenous plants, the new matter, being added internally, is provided with an excellent covering, formed of the main substance of the plant, and has no need of a separate protecting integument. Thus the endogenous plant is one uniform tissue from the circumference to the centre." 36.

Without prosecuting the details further we shall satisfy ourselves by transcribing the table of the Jussieuan arrangement; and select the description of the natural families of plants, to enable our readers to form their own opinion of the manner in which Mr. Reid has executed his task.

JUSSIEU'S NATURAL METHOD.

CRYPTOGAMIA (ACOTYLEDONEÆ)...... Sexual organs absent or not apparent........				CRYPTOGAMIA.
PHENOGAMIA (COTYLEDONEÆ). Sexual organs always present.	MONOCOTYLEDONEÆ (ENDOGENÆ.)		Stamens hypogynous....	MONOHYPOGYNEÆ.
			...... perigynous	MONOPERIGYNEÆ.
			...... epigynous	MONOEPIGYNEÆ.
	DICOTYLEDONEÆ (EXOGENÆ.)	APETALEÆ* ...	...... epigynous	EPISTAMINEÆ.
			...... perigynous	PERISTAMINEÆ.
			...... hypogynous ..	HYPOSTAMINEÆ.
		MONOPETALEÆ	...... hypogynous ..	HYPOCOROLLEÆ.
			...... perigynous	PERICOROLLEÆ.
			...... epigynous	EPICOROLLEÆ.
		POLYPETALEÆ	...... epigynous	EPIPETALEÆ.
			...... hypogynous....	HYPOPETALEÆ.
			...... perigynous	PERIPETALEÆ.
		Flowers constantly unisexual...........		DICLINEÆ*.

* In the following arrangement I have brought the orders in the last class (Diclineæ) to the subdivision Apetaleæ, and have dispensed with the arrangement into Epistamineæ, Peristamineæ, and Hypostamineæ, which cannot be applied with such propriety where the flowers are unisexual, and the perianth often altogether wanting.

ORDER LV.—SOLANEÆ.

"CHARACTERS.—Herbs or shrubs, with alternate leaves, and flowers variously arranged; calyx monosepalous, in 5 (rarely 4) divisions, more or less deep, persistent; corolla with a plaited æstivation, rotate, funnel-shaped, or campanulate, with the limb 5-cleft, (rarely 4), regular (except in Verbascum); stamens 5, (occasionally 1 somewhat abortive), inserted in the corolla, and alternate with its segments; ovary 2-celled, with 2 many-seeded placentæ; style and stigma simple; pericarp a 2-celled 2-valved capsule (Datura is 4-celled and 4-valved), or a berry 2-celled, or with many cells from enlargements of the placenta; embryo curved, in the interior of a fleshy albumen.

Examples.—Henbane (*Hyoscyamus niger*), Deadly Nightshade or Dwale (*Atropa belladonna*), Potato (*Solanum tuberosum*), Tobacco (*Nicotiana tabacum*). *Nolana* has a 5-lobed ovary, each lobe having 1 or 2 1-seeded cells. *Nicotiana multivalvis* has several cells external to the 2 central ones of the ovary.

Economical Properties.—The Potato is the fleshy tuber which grows on the roots or subterraneous branches of *Solanum tuberosum*. It consists almost entirely of a nutritious fecula, but is said to contain an acrid or narcotic principle; this, however, is in a very small proportion, and is dissipated by heat, as in boiling or roasting. The tubercles of *S. montanum* and *S. Venezuelæ* are of a similar nature.—*Richard*. The same author informs us, that in some countries the leaves of *S. nigrum* are boiled and eaten in the same manner as Spinach, and that the fruit is also much used in some places. The fruit of the Egg-plant (*Solanum melongena* or *S. esculentum*) is much used as an article of food in the West Indies, and in some provinces in France. The fruit of *S. lycopersicum* (Tomato or Love-apple) is frequently used for sauces; and the fruits of other species of Solanum, belonging to the Tomato section, are eatable. All these, however, are exposed to heat before being eaten. 'It is stated that the poisonous species derive their properties from the presence of a pulpy matter which surrounds the seeds; and that the wholesome kinds are destitute of this pulp, their fruit consisting only of what botanists call the Sarcocarp; that is to say, the centre of the rind in a more or less succulent state.'—*Lindley*. The dried berries and seeds of *Capsicum annuum* are known by the name of Cayenne Pepper; they are hot, pungent, and aromatic, and are used as a condiment. *C. frutescens* and *C. baccatum* have similar properties. The fruit of the Winter Cherry (*Physalis alkekengi*) is also used as a condiment.

Medicinal Properties.—The general character of this family, in a medicinal point of view, is narcotic. The root and leaves of *Atropa belladonna* are powerfully narcotic. Mr. Brandes discovered in this plant an alkali (*Atropia*), on which its narcotic properties depend, so extremely powerful, that the utmost caution is required in experimenting with it. The chief use of Belladonna is to dilate the pupil before the operation for cataract: abroad, it is used in hooping-cough. The herb and seeds of Henbane (*Hyoscyamus niger*) are also narcotic, and used in the same way as opium, where the use of the latter is inadmissible; the plant contains a peculiar alkali (*Hyoscyama*). *H. albus* and *H. aureus* have similar properties. The extreme twigs of Woody Nightshade or Bitter-Sweet (*Solanum dulcamara*) are narcotic, diaphoretic, and diurectic, but little used: an excellent bitter and tonic, said to be nearly equal to that of Cinchona, is obtained from the *Solanum pseudo-quina*. Solanum also contains a vegetable alkali (*Solanine*). The herb and seeds of Thorn Apple (*Datura stramonium*) are of a somewhat similar nature; smoking the plant has been recommended during the paroxysm of asthma. Mr. Brandes has found in this plant a vegetable alkali (*Daturine*), on which its properties seem to depend. The leaves of the Tobacco plant (*Nicotiana tabacum*) are narcotic, cathartic, emetic, diuretic, or errhine, according to the mode in which they are employed. Their use in the form of snuff or for smoking, is well known. The fruit of *Capsicum annuum* is an active stimulant and carminative, and is said to be destitute of any narcotic property. The leaves of the Mullein (*Verbascum thapsus*) are gently anodyne and emollient. The fruit of the Winter Cherry (*Physalis alkekengi*) is diuretic.

Officinal Plants.

Atropa belladonna.
Solanum dulcamara.
Hyoscyamus niger.
Datura Stramonium.
Nicotiana tabacum.
Verbascum thapsus.
Capsicum annuum.

POISONOUS PROPERTIES.—All the plants of the above list, except the two last and perhaps *Solanum dulcamara*, are violent narcotic poisons. The Mandragore, a powerful poison, is a species of Atropa (*A. Mandragora*): the root is the most dangerous part of the plant, but the fruit is also poisonous. The berries of *A. belladonna* have sometimes proved fatal to children. The volatile oil obtained from the leaves of Tobacco is a most virulent poison, and used by the Hottentots to poison snakes: its effects, when applied to the tongue, are almost instantaneous." 266.

VIII.

A PRACTICAL TREATISE ON THE FORMS, CAUSES, SANABILITY, AND TREATMENT OF PULMONARY CONSUMPTION. By *Edward Blackmore*, M.D. Physician to the Plymouth Public Dispensary. pp. 242. London, Longman and Co. 1832.

IN devoting a page or two of our Journal to the notice of the present work, by Dr. Blackmore, we are influenced by two considerations; one of which is more immediately applicable to the author—the other has reference to the public. An advertisement is appended to the volume, announcing that a second may be soon anticipated by his readers, its materials being ready for the press. Prompted by the most friendly feelings, we advise the author to rest a little from his labours, till he ascertains the amount of fame and of profit that may accrue from his present undertaking. It is not because a volume contains two hundred and forty-two pages, sufficiently well-printed and neatly got up, that, therefore, there must be something valuable—something new, or at least newly-illustrated and arranged, in its contents.—One might naturally expect this to be the case; but we are soon to be undeceived. So easy it is to become an author in the present day, that any boy, before he leaves college, may, by industriously copying out a few cases of any particular disease from the clinical records of a hospital, and affixing to the details some threadbare memoranda or flimsy remarks, have his name blazoned in all the newspapers and advertising-sheets of the Mæcenases of the age, and associated, at least for a month or two, with the names of Abercrombie, Bright, and other celebrated names.

> "'Tis pleasing, sure, to see one's name in print,
> A book's a book, altho' there's nothing in't."

The judgment of the poet may be correct in the opinions of booksellers, of the authors themselves, and the authors' friends and patients; but, as reviewers, we may find that we cannot agree with them. Our duty to the medical public is twofold—to deliver a candid and impartial opinion of the general merits of the books sent for our inspection, in order that our professional brethren may be guided in the selection of such works as are useful, or essential to have in their libraries; and, secondly, to extract the most important and useful information from their pages; to concentrate the pith and marrow of their contents.

A very copious preface meets us at the threshold, in which the author descants upon the "inductive" and "eclectic" methods of writing; but we confess ourselves incompetent to understand the interpretation which he gives of them. Then are adduced extracts from d'Alembert, Galen, Haller, Bacon, Horace, Boethius, Cullen, Pinel, Friend, and a host of others, to prove or illustrate we hardly know what.

The second section of the preface treats of the various definitions and divisions of consumptive diseases; the nosological, pathological, and noso-pathological modes of classification, which, we are assured, "are harmonious, and complemental of one the other." The following two sentences are extracted from one page, and we must leave it to the ingenuity of our readers to make them, if possible, harmonious and complemental.

> "The symptoms *alone*, on the other hand, cannot be made the ground-work of pathological distinction, for under similar symptoms we find several organic lesions, various in appearance, but similar in kind." "The forms of pulmonary disorganization which are pathologically different, will be found to exhibit a cognisable diversity in the combination or succession of the symptoms; although that diversity may escape the perspicacity of careless observers." xvi.

The third section is occupied with numerous extracts from several authors, strung together with somewhat random *profusion*, if not sometimes *confusion*. Baglivi, Alison, Bishop Berkeley, the Edinburgh Review, Dr. Baron, and Dr. Whately (from whose work on rhetoric we are favoured with a long quotation on "what constitutes experience"), are the names which figure in Dr. B.'s pages.

The preface, which occupies no fewer than 24 pages, being thus discussed, we proceed with our analysis. The very first sentence of the first chapter has these words:

> "The Pathology of the Lungs comprehends three genera of disorders; the Inflammatory, the Consumptive, and the Nervous. The Consumptive Affections include all the cachectic* disorders which are characterized by cough, purulent sputa, hectic fever, and emaciation." 1.

Now, if consumptive diseases are quite distinct from inflammatory ones, how will the definition quoted from Mason Good be upheld? for we are told that consumption is a cachectic disorder, and that a cachectic disorder is "a depravity which originates from, or manifests itself in, the sanguineous function, as it regards the vessels or the fluid." Are not inflammations depravities, that is, abnormal changes, or aberrations from a healthy state, in the sanguiferous system? But, waiving this objection which more pertains to critical accuracy than to practical importance, is it possible that Dr. Blackmore has never seen a case of unequivocal phthisis, accompanied with symptoms of obstinate inflammation during life, and exhibiting undisputed proofs of the result of inflammation after death? Does he not know that an attack of pneumonia or of pleuritis, in a person hereditarily disposed to consumption, will often, very often, lead on the melancholy train of hectic fever, cough, and purulent expectoration? These three symptoms our author considers as pathognomonic of the disease; and so widely comprehensive is his definition of consumption, that he admits even "fatal cases of organic disease in the abdominal viscera, with cough and purulent sputa;" and yet, in his preliminary classification of thoracic diseases, he adopts the most palpably-erroneous arrangement on which an author could well stumble; namely, into such as are inflammatory, consumptive, and nervous. In which of these classes or orders is the learned author to find a place for hæmoptysis, œdema, and emphysema of the lungs, pulmonary apoplexy, and so forth? We allude to this fatal error, occurring, too, at the very commencement of the book, as exhibiting the unpardonable negligence with which it has been got up. Proceeding, step by step, we find ourselves lost in a forest of names, to each of which is tacked a disjointed sentence; and when we have at length emerged, we discover that there are two orders of consumption, the "spurious" and the "genuine."

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* "The term Cachexy is used to signify 'a depravity which originates from, or manifests itself in, the Sanguineous function, as it regard the vessels or the fluid.' Dr. Mason Good, physiol. nosolog. p. 223. All organic diseases are properly herein comprised."

> "That is genuine Phthisis, in the language of Celsus, when decline originates in a disease of the Lungs;—and the epithets Tabes, Atrophia, Marasmus, are used by recent nosologists to designate consumption from disease in other organs. When the lung is affected secondarily, and its disorder in itself minor and innocent, disease in another part being the primary affection, and the essential cause of death, such a malady may be properly designated Spurious or Secondary phthisis: and a diverse order of succession in the symptoms will distinguish this case from the primary idiopathic affection of the Bronchial membrane which is termed Mucous or Catarrhal Consumption." 6.

And again—

> "If it is correctly assumed that phthisis is essentially a *fatal* pulmonary affection, a case of hectic from suppuration in the lungs is not truly phthisical; for such a condition is *sanable*; this may be styled spurious consumption, in distinction from those cases which are necessarily mortal. To apply the term, however, to an insanable case of pulmonary disorder with phthisical symptoms, because the lungs are *not* visibly disorganized, is to introduce confusion into Nosology and Pathology." 6.

And again—

> "The general arrangement adopted in this Treatise, will exhibit TWO distinct ORDERS;—First, the cases with the usual symptoms of consumption, apparently hopeless, but ending in *recovery*. (See chap. III.) And Secondly, the cases progressively passing on to a fatal termination. In some of the cases in this latter division the disorganizing malady is seated in other organs than the lungs; the cough and puriform expectoration being secondary. In these, the supervenient pulmonary affection (which in most instances is confined to the mucous membrane of the Bronchia,) is not the proximate cause of the hectic and emaciation; nor is it essentially fatal: the primary disorder, however, has often been so completely disguised by the supervenient affection as only to have been detected on dissection.—(See Dr. Hastings on *Bronchitis*, p. 117.) An organic disease in the abdominal viscera may subsist in a latent or tranquil state for years; and then on the rise of a slight pulmonary disorder the patient will be rapidly cut off: so that this secondary affection, which by itself would be innocuous, will in this complication be of important consequence." 8.

Bewildered and confused as we have been in the maze of errors and inconsistencies, we scarcely, however, expected to find that one of the forms of consumption is designated chronic, remittent, and *inflammatory*, after the boundary line had been drawn in the memorable first sentence of his book! To render the inconsistency still more inexcusable, read the following sentences, which the author indites preliminary to the detail of cases exemplifying the first form.

> "Two Orders of cases will be given;—First, those which were seen in a state of pulmonic inflammation, but ascertained by their result to be of a truly consumptive nature, although life was destroyed before the completion of the phthisical disorganizing process; and Second, cases seen in the state of confirmed phthisis. In some the affection was chiefly seated in the bronchial membrane, or in the interior of the lung,—consisting in a suppurative action, with or without Tubercles; in others, the symptoms indicated an affection of the exterior or Serous membrane of the lung and of the chest. The former may be styled Empneumonic, the latter Peri-pneumonic cases. Some cases again are simple, the Lungs alone being diseased; in others, there is an important complication of other maladies." 11.
>
> "The phthisical inflammation may be regarded, *first*, as to its *seat* in the substance of the lung, or in its serous membrane; *secondly*, as to its distinct nature in the several forms of consumption. 1.—'There is a variety of peripneumony where there is no pain, which is longer and severe,—the lung is very dark.'* There is a similar fallacy in the symptoms of this variety to that which Professor Burns has remarked of Bronchitis in infants,—'a *pale* face, and oppressed look, which delude into a trifling mode of cure.' It is important not to be deceived by a low oppressed pulse.† There is a practical observation of Huxham worth remembering, that in pneumonic inflammation, pain at the bottom of the chest, with borborygmi, and a swelled belly, is relieved by clysters,'—the intestines being the seat of disorder." 215.

We deem it quite unnecessary to select any number of cases from the present work; they have been fished from all possible sources, and are reported with such prolixity, as to render them tediously uninteresting and little instructive; every minute particular is wearisomely enumerated, and we sometimes in vain search, in the report of the dissections, for the pathology of the disease in question. Strange that our author should be guilty of an error, which he reprobates himself in the words of Haller, quoted in the preface:

> "Sincere et simpliciter enarrare quæ vidi, et breviter; vereor enim ne parum ii scriptores legantur qui nimia abundantia *exiguorum accidentium* historias suas producunt, et lectuis tædium movent." viii.

But to satisfy our readers that the above strictures are warranted by impartial justice, we shall allow them to judge for themselves of the followiug cases, which are transcribed verbatim.

> "CASE XIII.—A. T. a 22, (Jan. 1831,) of high sensibility and genius, in June, 1829, after a severe cold, was affected with cough, and pain at the left chest, which was neglected for three months. In the winter she suffered much from fatigue and mental anxiety. In the spring of 1830 she spat blood, and the pain of the side became acute. Leeches and blisters were then used, general blood-letting being neglected: the cough persisted during the summer, with expectoration of one ounce of matter in a week, like *soft cheese* mixed with common mucus, which on drying became friable;—the matter of Tubercles? A physician then thought her to be in consumption, and prescribed the lichen island. and change of climate. She has never worn flannel; and has persisted in the use of wine and animal food. There is now a deep sonorous cough, occasional

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* Dr. Hooper. † Dr. D. Monro.

hoarseness of the voice, evening fever, and some emaciation; the menstrua irregular. 6th to 11th—An attack of Measles, during which the cough and sputa were suspended, and diarrhœa came on. Kino, creta, and flannel were then prescribed. After the measles severe pain at the side returned, with a harsh cough, and difficult expectoration. (Nitrat. potass. liq. ammon. acet. tr. digit. pil. hyos. p. Jacobi, ipecac. hirudines.) 14th—Respiration very quick, costiveness, a rapid but softer pulse, (110—120) a loaded dry tongue, intense thirst. (Calomel. scammon. tr. scillæ. ung. hydr. antim. tart.)—17th—Cough less harsh, but in severe paroxysms at night with more excretion of viscid opake bloody mucus, without a vestige of pus, or tuberculous matter; four stools a day, which are more natural; hectic at 2, p.m. pulse 120, tongue clean and moist. (Hyosciam. scilla, cum aceto.) 18th—Cough relieved; some blood from the nostril. Percussion painful below the clavicle, and betwixt the shoulders, where also by the stethoscope the respiration is inaudible. The voice is so raucous and low that pectoriloquy cannot be ascertained. (Acid. nitric-hydrodyanic. narcotic, h. s.) 19th—The narcotic has been of admirable effect; hectic at noon, during which there is oppression at the lungs, with hard cough and laborious respiration, and appetency for solid food. Interm. acid. nitric.-hydrocyan.) 20th—Good stools, pulse 110; defect of voice remains, but no irritation at the larynx. (E. C. hyos. cum digital. vesp.) 21st—Fever and cough relieved, sputa less viscid, tea vomited, but no nausea; pulse 100. (Acid. nitric. victus ex carne decocto.) 24th—Cough severer, sputa more copious, ragged and viscid, tongue loaded, the legs ache, vertigo on exercise, much emaciation, no hectic, soreness at the larynx, fetid stools. (E. c. alia ut 6to. supra.) 27th—Since the severe weather the symptoms have become worse, the arm is numb as if the ulnar nerve were struck; some roast chicken eat. (Acet. scillit. hyosc. &c.) 28th—The sputa sink in water, are fetid and caseous, seeming to consist of pus or soft tuberculous matter; hectic high, with tightness at the chest, which some leeches relieved, pulse 100.—The adhesive inflammation in the lungs seems to have prevented the opening of the tubercles into the bronchia before now; the inflammatory stage, which began in the measles, has ended in a month. 29th—The caseous sputa enveloped by viscid mucus. (Infus. calumb. aurant. acid. nitric. prussic t. d. hyosciam. scilla. o. n. pil. cath.) 31st—More cough, and fawn-coloured sputa; pulse 120, soreness beneath the sternum. (Omitr. victus ex-carne, et tonica. St. scil. et digital. hiruds.) Feb. 1 and 2, relief. (E. c.) 3rd—Pulse 130; less pus and blood in the sputa. (Infus. humuli cm. digital. t. d. liq. opii sedat. hyosciam. ipecac. o. n. vegetable diet.) 10th to 14th—Stupor and delirium from the narcotics; the sputa now consist of pure pus; aphthæ and diarrhœa, tremors from debility, pulse 110 to 130. (Infus. calumb. cm. aceto. liq. calcis, catechu, acet. morphiæ.) Diet of yolk of egg and beef tea.

By these remedies the diarrhœa was stopped, the thrush disappeared, and the system was composed, but copious purulent cream-like sputa, with colliquative sweats, continued.

19th—Mild delirium from exhaustion, after transporting religious emotion. On using some *cold* lemon-tea, she complained of a sense of suffocation as if dying; this was relieved by external heat; pulse very small and rapid. (Claret, ordered.) 22nd—Aphthæ have recurred; much cough, less easy expectoration; the sputa are large, and seem to come from large cavities in the lungs; little fever. The subsidence of fever, when fits of syncope and suffocation supervene, marks the approach of death. 25th—Porter and animal jelly used, little medicine but magnesia and rhubarb; more cough, hectic and debility; dyspnœa in paroxysms. (E. canth.) 26th—Relief of suffocation, but the odour of death observed all the day. At 6, p.m. mortal exhaustion ensued on her making a slight effort; at 7, consciousness was entire, her mind full of christian peace and hope; then followed a dreadful agony of suffocation, which was relieved by admitting the fresh air; at eight o'clock the pulse was gone and the limbs cold; then mild delirium and risus sardonicus, which were succeeded by coma, the respiration continuing, but performed chiefly by the auxiliary respiratory muscles, then it became suspended at intervals; shortly after a rattle in the throat the last breath was expired, her countenance remaining beautifully tranquil;—a faint emblem of the bliss of her saintly spirit in the presence of her Saviour and her God!

The measles certainly excited into fatal action the disease in the lung, which had probably long ago formed tubercles and induration. The softening and evacuation of tubercles is here seen to be a distinct condition of the lung from inflammation; although this is often an adjunct which essentially promotes that state. The symptoms in January were obviously distinct from the simple debility hectic and purulent expectoration which existed during February: the change observed in the sputa from a viscid to a cream-like character marked the entire subsidence of inflammation. The utility of sedatives, narcotics, and counter-irritants was very manifest. The unusual definiteness and alternation in the symptoms and the phenomena of dissolution render this case very interesting.

Case XIV.—Horral, m. a. 30 (*February* 20, 1829), of a florid strumous aspect, has been ill for six weeks, from cold, with cough, sputa and much dyspnœa. He has had diarrhœa lately; at present tremors, a white tongue, and rapid pulse. Several of his relatives have died of phthisis. (Colchic. scilla, digitalis, creta cum opio.) 24th—Much better. (Acid. nitricum, rheum, E. C.) *March* 4th—No cough, but some pain at the side, and breathlessness on exertion, a quick pulse and a white expanded tongue. 11th—Much breathlessness; aspect delicate. (Sulphas ferri, digital.) 16th—Cough, perspiration, red urine, a rapid pulse; in other respects better. (Sulphas potass. cum rheo, scilla, et alia.) Pain at the stomach like heartburn, ascribed to the medicine; little cough, mind dejected. (Magnes. E. Canth.) 30th—Cough, with breathlessness and fainting, but the stomach is better. (Scilla, æther, digital.) *April* 6th—Complains of heat at the stomach and sleeplessness. (Magnes. digit.) 8th—Vomiting and ischury. 15th—Phthisis advancing; the legs swell, and he is sick and giddy; all the medicine, even soda-water, is vomited; gastritis erythematica developed, hectical aspect. (Nitric. acid. digitalis, hirud. magnes. in aq. cinam.)—The mildness of the phthisical symptoms, and their alternation with the dyspeptic, deserves remark. 20th—Much anasarca. (Acetum scillit.) 26th—Death.—The disease ran its course in four months.

A well marked instance of the acute scrofulous consumption; it forms an interesting subject of comparison with Langdon's and Urquhart's; the tonics were here also injurious. *See* Louis, in chap. II. for the morbid appearances in the stomach in similar cases."

"Complicated with Disease in the Brain.

Case LXI.—Rendel, m. a. 60, of a tense spare habit, and temperate, (Aug. 1829,) has long had pain at the head, vertigo, and a gradual loss of vision, more entire in the *right* eye, which is small and retracted, while the *left* is large and protruded. In September he had much aching through the forehead; complete blindness on the right eye, but the pupil was moveable, the sight of the left imperfect. Various means were used at the Eye Infirmary without effect. At the end of Oct. he had a severe attack of pain in the right side, for which he was once bled; he then went into the Poor-house Hospital, where cough and dyspnœa continued, and the disorder in the head, with low nightly delirium, increased. Dec. 8th—Little cura adopted;—death this morning.

Inspection—10 hrs. p. m.—Much blood in the integuments of the head, the inner table of the frontal bone at the sinuses and crista galli was widely separated from the exterior, and inclined inwards on the brain; the left orbitar plate destroyed; the back part of the orbit filled by a tumor the size of a large walnut, of a cystic honey-comb structure, of a bony hardness, its cells small, filled with fluid like white of egg and honey; it had nearly corroded the left temple, and extended into the posterior nares; through it passed the third pair of nerves, enlarged and softened; the optic nerve which also passed through its lower part was small; as was the eye-ball, but not evidently diseased. The tumor adhered by a glutinous substance to the temporal bone and to the eye-ball; appearing to have corroded all the parts it touched; it extended to the right orbit, the plate of which was partially carious; all the processes of the ethmoid bone and the vomer were carious, or softened, so as to be easily cut out. The brain and cerebellum small, soft, bloody points in it; 1 oz. of serum in the ventricles; a small hydatid in the choroid plexus. The left lung adherent at its anterior part; it did not collapse on the chest being opened; its posterior part vascular; its bronchia loaded with frothy serum; no induration except at one spot of its anterior part, where was some coagulable lymph on its pleura; the mucous membrane of the bronchi not vascular; no blood in the lung; black matter, but no serum in the cellular texture and bronchial glands; the right lung firmly adherent to the chest and pericardium; all its lobes consolidated, like *pudding-stone*, rather shrunken, *not an air-cell or blood-vessel visible;* no distinct tubercle. The disease had been allowed to work its disorganising effects without control. No serum in the chest; some in the pericardium.—The heart pale and flabby.

The serous effusion into the air-cells of the left lung was the immediate cause of death; but *simple* inflammation will not explain the remarkable induration here seen; *hepatisation* does not express this condition of the lung; it is truly a scirrhous state, a peculiar phthisical induration.—Ulceration is not an essential component part of the phthisical disorganisation.—The malignant tumor in the head shows that there was a specific cachectic action and disposition in the constitution; a peculiar mode of vascular action, conjoined with a specific state of the blood." 156.

Before we conclude our notice of Dr. Blackmore's cases, it is worth mentioning that they all agree in one particular; a circumstance, too, which no doubt will be very consoling to consumptive patients, and to young medical men, who may be tempted to look into the book for instructions to direct them in practice; we mean their universal fatality. How does this harmonize with the good things promised in the title—" A practical Treatise on the Forms, Causes, *Sanability*, and *Treatment* of Pulmonary Consumption"? The other general remark which we have to make is that, throughout the whole treatise, the name of the stethoscope, the wonder-working safety-tube of the immortal Laennec, is scarcely even mentioned by the Doctor! Attend to the meagre and niggardly notices in the cases which, we suppose, were under the author's care;—" *A full inspiration easily made, and respiratory sound heard well by the stethoscope; no pain.*" " *By the stethoscope a strong* jarring *action of the heart is heard throughout the chest, respiration natural.*" Such is the tribute paid to the greatest medical discovery of modern times!!

So great is the want of discrimination displayed in one case that we are tempted to quote it, as a summing up of our censures on the present work, which the Doctor will, no doubt, think much too severe.

" CASE XXXI.—Pearse, m. a. 42, (Feb. 9th, 1831,) a sailor, of intemperate and idle habits, has been ill for six months; at first he had cough and spitting for a month, which subsided without medical aid. On Christmas eve last he spat a cup-full of blood; blood was then abstracted by a Surgeon-Apothecary, who did not see him again. Some medicines were afterwards taken from a Quack;

cough and sputa, not copious, remained. He has now a sallow anxious countenance, with cough, dyspnœa, and occasional hæmoptysis. It was his habit nine months ago to eat only a potatoe and some bread in the day—spirits being his chief aliment. March 21. Hæmorrhoidal tumors painful; much dyspnœa, some cough and viscid sputa, some pain at the chest a few days ago; recumbent posture untenable; pulse nearly gone, much anxiety and sleeplessness, costiveness, no dropsy, no fever. At night he eat a beef-steak, and died from suffocation in five hours. The cura to March 23rd, consisted of Miss. sang. 10 oz. empl. canth. duo. emp. picis cum antim. tart. pil. hydrarg. scilla, ipecac. digitalis, colchic. hyosc. ether. nitric. antim. tart. cathart. copaiba ad anum. quinine.

Inspection, 12 hours p.m.—The body very warm; no sugillation, but black dissolved blood issued from the incised integuments and muscles. The peritoneum thickened and opake, containing 10 oz. of serum. The left lobe of the liver extended for two inches below the ribs; the whole organ was enlarged and hardish; on a section of the left half a dark nutmeg structure was seen, as if the sanguine-vascular portion was turgid; the back part of the right lobe was more natural. Dark bile in the gall-bladder. The stomach small, its muscular coat enlarged, the veins betwixt its peritoneal and mucous coats as large as a crow-quill; the mucous coat like scarlet cloth, thickened, rugose, granular, containing viscid-yellow-brown acrid mucus. The intestines were very small, their coats thick; the valvulæ conniventes of the mucous coat intensely red, covered with acrid bilious mucus; the peritoneal membrane of a diffuse florid vascularity. The omenta vascular; the mesentery large and vascular. The pancreas large and hardish. The spleen very small, hard and dark. All the digestive organs shewed severe marks of vascular excitement, and constant contraction;—the sad effects of habitual drunkenness! There was no chyme seen; the last meal must have been digested. In the sacs of the pleuræ little serum; some in the pericardium. The right lung unadherent, turgid with serum, mucus and air, carneous and vascular at the thick part of its upper lobe; the interior of the bronchi vascular. The left lung similar to the right, but not carneous; its air-cells and cellular tissue dropsical. The *heart* as large as a bullock's; on the under surface of the *left* ventricle an opake jelly-like spot, as if it had been the seat of inflammation; its muscular substance and cavities vastly enlarged; the right less so. All the cavities and the large vessels, engorged with black grumous blood. —The aorta and pulmonary arteries very large, inelastic like leather—no osseous granules; the valves sound.

The disease in the aorta may have been the primary affection in the chest; the enlargement of the heart was from idiopathic inflammation, by the constant stimulus of spirits, and also from the difficult transmission of the blood through the aorta and its abdominal branches. The pulse did not indicate the state of the heart.

The morbid condition of the lung was secondary, and the effect of obstructed circulation in the heart.

Alcohol seems to effect a dissolution of the blood; its albumen is coagulated, and the serum extravasated on the circulation being impeded; the glandular organs become indurated, the hollow muscular system contracted and morbidly vascular.

The dropsy of the lungs, which was the chief morbid appearance in them, was not indicated by external dropsy." 93.

We put two simple queries to the Doctor:—1. Is the above a case of consumption at all? 2. Did you even suspect disease of the heart, which, we are told, was found on dissection "as large as a bullock's." ?

However Dr. Blackmore may resent the strictures which we have deemed it incumbent on us to make on the publication under review, we are convinced that, ten years hence, he will consider them as salutary, although very unpalatable. Nothing is so injurious to a young author as undeserved praise—nothing so profitable as censure, *if* deserved. Dr. B. will say *if*—and console himself with the reflection that our criticisms are unfair, uncandid, and ill-natured. The public will judge.

IX.

Medical Reports, selected by the Madras Medical Board, from the Records of their Office, &c. Madras, 1831.

These reports are drawn up by Mr. Fleming, the Secretary of the Board, and are necessarily miscellaneous in their nature and unequal in their importance. The first four reports from Messrs. Lister, Thomson, Lawrance, and Scarman, are on epidemic cholera; but unfortunately we have enough of that article now at home, without any necessity for a fresh *importation*. It is not a little curious, however, to remark that the epidemic cholera which has occurred of late years in India, corresponds much more with that which is ravaging Europe, than that which has been described by the three Boards soon after 1817. This similarity respects the antecedent diarrhœa and the consecutive fever, which now seem to be almost as constant in India as in Europe. This fact alone goes far to shew that epidemic causes are at work on a large scale, and one larger than formerly. The following extract from one of these reports is worthy of record.

"Causes. The regiment left Bellary on the 4th October; and, from that day until the 26th, when it crossed the Kistna, the rain was almost incessant, with much thunder. We were detained seven days on the banks of the Hoogery, two at the Toomboodera, and three at the Kistna. The men suffered little sickness during this time; but I imagine the fatigue and exposure they then underwent predisposed them to the disease. Many of them were greatly in want of money, and, I fear, were consequently very badly fed. After crossing the Kistna we had no more rain; the sun was powerful during the day, and the nights were very cold. Many of the patients said they had slept exposed to the open air at night. This is all I observed respecting the cause of this severe attack. There was no cholera in any of the villages we passed. A great many of the followers were attacked, and suffered more severely than the sepoys, not being brought to the hospital till past recovery. 25 cases among the sepoys occurred after our arrival here, and two as late as 13 days afterwards. There was not a case of cholera except in our lines at this station. These facts show the length of time the disposition to the disease may continue in those who have been exposed to its causes. A very remarkable instance of the same kind was mentioned to me by Mr. M'Cabe, which it may not be improper to insert here. A number of Europeans came from St. Thomas's Mount, where the cholera was raging, to Poonamallee, which was free from the disease. In the course of a few days 22 of them were seized with cholera, whilst *not one* of the other Europeans at Poonamallee were attacked. These facts seem also to argue strongly that the disease is not contagious. With respect to sol-lunar influence, these cases favor Mr. Orton's opinion, as 39 of them occurred near the full and change of the moon, and only 14 near the quarters." 16.

A remarkable instance of the effects of locality is mentioned by Mr. Lister of the 46th Regiment. In the month of August, 1826, a detachment, arrived from Bellary on the right bank of the Kistna. The river had overflowed its banks, and the men were delayed for want of boats on the oozy soil for a day or two. The cholera immediately broke out; and continued till they crossed the river and got to some distance on the other side, when it disappeared. Two officers who were very much afraid of the disease caught it, and one of them died. Many other instances are related by the different reporters of the injurious influence of rivers and malarious localities, as also of the strong predisposition caused by fear. We could add many similar instances in this metropolis, both of the tenacity with which the disease clings to the banks of Rivers, and the sedative effects of terror as predisposing to the choleric orgasm. As to the remedies employed by the Madras Reporters, we need not enumerate them here. Few of them were useful—none specific.

II. *Dysentery.* Dr. Mortimer, in a report, draws the attention of the profession to the employment of ipecacuan in dysentery, given in nauseating doses immediately after bleeding, either general or topical, followed by a dose of castor oil. This remedy was exhibited to the extent of five grains (mixed with some powdered gum arabic) every hour or second hour, as the patient's stomach would bear it without actual vomiting. During the taking of this medicine, no fluids were permitted to be swallowed. The nausea is rather distressing, and vomiting is often induced though not desired. Sweat is generally excited. The improvement of the biliary secretion under the administration of ipecacuan was manifest. Where the bile was vitiated or redundant calomel, in considerable doses, was employed. This Report is drawn out to an unreasonable length by the unnecessary multiplication of cases, and the tediously minute detail of all the symptoms and remedies. Still the Report contains valuable materials for the Indian practitioner's guidance at the bed side.

III. *On the Use of Sulphate of Quinine.* By Surgeon W. Geddies *and others.*—Our author, who has used the quinine very extensively in India, affirms that, next to opium, it is the most valuable medicine we possess. Its efficacy in checking the tendency to paroxymal exacerbations of disease, so general in tropical climates, renders it an invaluable remedy there as well as elsewhere.

"The types of constitutional affection, attendant on dysentery, irritation, debility, and the like, all appear, at times, to put on this paroxysmal form; and, as tending much to aggravate the original disorder, it is evidently an important point, in the treatment of them, to check the febrile exacerbations at as early a period as possible. Wherever, therefore, in any disease, an evident increase of the frequency of pulse, and heat of skin, has been observed to occur, at any particular period of the day, for two or more times, I have at once, without reference to the presence of any other symptoms, had recourse to the quinine, in combination with other remedies for the relief of whatever other disorder may attend the febrile exacerbations. I have thus used the quinine, not only in intermittent fever, or, its more violent form, the remittent type, but I have extended its use to check the exacerbations of the febrile affection attending, and so greatly aggravating, acute dysenteric affections. I have also applied it to prevent the quotidian exacerbations, occasionally occurring in convalescence from tedious, or severe, disorders, such as hepatitis, chronic degrees of dysentery or diarrhœa, bad health with ulcers, and the like. I have used it likewise for the relief of some other disorders of an intermittent nature, and for rheumatism; and its tonic powers have been applied for various states of the constitution requiring such remedies." 202.

Mr. Geddes proceeds to the particulars of his treatment; but they need not detain us here, as the principle is easily understood, and the application is now in common use among the best informed practitioners.

This report is followed by one from assistant Surgeon Malcolmson, on the same subject, and proving the great value of the quinine, in tropical fevers of intermittent type. Mr. Cruikshank succeeds Mr. Malcolmson, and these two are followed by several other reporters, all bearing the same testimony.

IV. *Cases of Phlebitis.* By SURGEON BOND. Several cases of this dangerous affection are related, one or two of which are fatal—the rest successful, apparently from an operation which Mr. Bond got into the habit of performing in such cases. The operation is thus concisely described by one of the members of the Madras Medical Board, who was superintendent surgeon of the station, where Mr. Bond practised, and witnessed the cases.

"The operation was performed as follows. An incision was made with a scalpel through the integuments, and the median basilic vein exposed, a director was then introduced through the puncture, and, with a probe pointed bistoury, the opening was extended above and below as far as there was any appearance of pus, which was carefully extracted by pressure, and the wound closed in the usual manner." 271.

V. *Syphilis treated without Mercury.* A long train of reports are here presented on a subject that excited considerable interest a few years ago. We believe that few practical surgeons, now-a-days, trust to the non-mercurial treatment of syphilis, where the disease is unequivocal. Nevertheless, the experiments and investigations on this subject, have greatly checked the abuse of mercury in syphilitic complaints, though they have not shaken the faith of surgeons in a well regulated administration of this powerful medicine.

The volume concludes with some additional reports on the use of quinine, and a short paper by Mr. Lane, on purulent and gonorrhœal ophthalmia. We beg to return our best thanks to the Madras Medical Board for the volume which we have thus hastily noticed.

X.

OBSERVATIONS ON THE GENERAL PRINCIPLES, AND ON THE PARTICULAR NATURE AND TREATMENT OF VARIOUS SPECIES OF INFLAMMATION. By *J. H. James*, Surgeon to the Devon and Exeter Hospital, and Consulting Surgeon to the Exeter Dispensary. 8vo., pp. 558. London, 1832.

IT is now ten years since Mr. James published the first edition of his work on Inflammation, and the interval appears to have been employed in collecting information. The present volume is of magnitude much superior to its predecessor, and we do not doubt that its increase of actual value is in a ratio not very disproportionate to the augmentation of size. We do not propose to analyze this edition, nor even to review it. Its composition is too elementary for such a purpose, and, being a second edition, we should travel over ground familiar to many of our readers. Yet we cannot permit so large an accession to the stock of professional knowledge to pass unnoticed; such a course would be unjust to the author, our readers, and ourselves. We shall select and present an interesting or useful passage here and there, without attempting to connect and unite into the shape of a consistent whole, the heterogeneous fragments.

STATE OF THE VESSELS IN INFLAMMATION.

The determination of this state would be to a great degree the determination of the long and eager disputes on the proximate cause of inflammation. The prevailing opinion at present appears to be, that the capillary vessels are weakened, and dilated, because, by reason of that weakness, they are unable to resist the *ordinary* force of the heart and large vessels. This has always appeared to us a fallacious theory, although we are willing to allow that it is a specious one. The proper method of forming a theory of inflammation, is, by carefully studying phenomena, and drawing deductions as rigorously precise and germane to the truth as possible. We have not space nor time to enter on this discussion at present, yet we may be permitted to allude to some of the opinions and arguments of Mr. James. This gentleman, like ourselves, doubts the theory to which we have alluded. Let us glance at the appearances presented, under favourable circumstances, to the eye.

Inflammation may be excited by various irritants in parts where its progress may be watched, as in the web of the frog's foot, or the mesentery of hot blooded animals.

"At first, the capillary vessels contracting, the circulation is accelerated towards the point irritated. They then become dilated; after a time the motion in them is lessened, becomes oscillatory, and in some cases is stopped altogether, the globules showing a disposition to coalesce; but it is also stated, on good authority, that while in the centre there is cessation of motion, around this the blood moves more slowly than natural; but still further, *with more than ordinary speed.*" 13.

It is evident, then, that the capillary vessels are dilated, and that there is an unnatural quantity of blood in the part. On this all parties are agreed; but beyond this there is no unanimity nor consent. The question is as to the existence of local action, or the reverse. We do not think that the debility or otherwise should be limited by either party to the capillaries; their object should be to decide on the condition of the *smaller vessels*, including the capillaries; to ascertain whether the circulation through them is accelerated or retarded, augmented in force, or diminished. This seems to us to be the real and practical question. It is idle and unprofitable to discuss the existence of action or inaction in the capillary tubes; we know not strictly what their natural powers are, and consequently we possess no accurate standard of comparison. But it is of importance to ascertain the state of the circulation in the part. If this be decidedly active, and we cannot but imagine that in a fair instance of phlegmonous inflammation it is so, it signifies comparatively little what abstract notions we may entertain respecting the action of the capillaries.

Let us look at the phenomena of phlegmonous inflammation, 1st. *Heat.* It is generally supposed that this is produced by the greater afflux of blood from the interior, because it is known that the blood of the interior is of a higher temperature than that of the surface. And, setting aside the satisfactory experiments that have been made by John Hunter and others, this view of the cause of increased heat, is corroborated by the fact, that the cheek, when suffused with a passing blush, does glow under the temporary accession of blood from the internal parts. But if there were a stasis of blood in the inflamed part, the heat would not be maintained, for the blood being placed under the same circumstances as the surface of the body would lose its temperature, as it does. We may infer then, that not only more blood does arrive at the part, but also that it circulates through it with more than usual rapidity. If this be denied, then we cannot explain the phenomena of increased heat by the state of the local circulation. Throbbing, perceptible and painful, is an accompaniment of heat in inflammation. This is explained by the impulse of the heart being more sensibly felt in the dilated and weakened vessels. It is certainly present when the action of the heart is not manifestly augmented, and those who have suffered from whitlow know that it is not confined to the point immediately inflamed. It usually ceases when suppuration is established; yet we think it would be difficult to prove that the vessels then cease to be weak, if they were weak before, or to be delated, if before dilated by the action of the heart. Mr. James remarks, that if the blood be pressed out of an inflamed part, it will return with great velocity when the pressure is withdrawn. In parts reddened from cold, where there is evident congestion, the contrary is the case.

2. *Redness.* An inflamed part, if formerly white, becomes more or less red, and if previously red, it is rendered redder. This arises, of course, from the greater quantity of red blood which is in it. But we must not stop here. Venous, blood and arterial differ in colour, and, for precisely the same reason, blood circulating slowly is less florid than blood circulating rapidly. In phlegmonous inflammation the colour is vivid, not only because there is much arterial blood in the part, but also because that arterial blood is frequently renewed; in other words, because it is circulated with rapidity. If an incision be made into an inflamed part, all surgeons are aware that not only does more blood escape, but that it escapes with unusual force from

vessels of all calibre. It may be said that this is owing to the increased propulsive power of the heart. In inflammation sympathetically affecting the vascular system this is partly true, but in slighter inflammations, where observation can detect no alteration whatever of the general circulation, such a supposition cannot be received. It is difficult to suppose that the weakened vessels, unassisted by increase of force in the heart, would not only bleed more freely, but throw out their blood with more power.

3. *Swelling*. The considerations which present themselves on this phenomenon, do not prove or disprove the theory of inflammation at issue.

4. *Pain*. The pain attending acute inflammation is familiar; it is active, acute, energetic. It is explained by the pressure exercised on the nervous filaments by the enlarged blood-vessels. Probably this is not the whole truth. As the nervous system is the system of relation, that which informs both the animal and the organic life of impressions from without, it seems reasonable to imagine that the external irritant which has occasioned the phenomena of inflammation displayed by the vascular system, has also contributed to excite the sensibility of the nerves. However, this is a subject too extensive and also too subtle for us to enter on. It is evident that the nervous system is intimately linked with the vascular in inflammation. The pain attending the different varieties of inflammation varies in intensity and kind; it differs in acute pleurisy and in rheumatism, in erysipelas and in phlegmon. In certain kinds of inflammation which are called latent, pain is frequently absent. We have seen a dozen, aye, several dozen instances, in a large London Hospital, of death from latent pleuro-pneumonia, where there was little or no pain during life. In acute phlegmonous inflammation not only is the pain pungent, but the ordinary sensibility of the part is excessively increased. Now we know that such an increase argues an augmentation of the powers of the nervous system. But such an augmentation is hardly consistent with debility in the vascular system, and what is applicable to the two systems considered each as a whole, seems fairly applicable to their parts. Thus, latent inflammations usually occur in persons exhausted by typhus, by the discharge from compound fractures, &c. and it may be imagined that it is this exhaustion, shared by the vascular and nervous systems, which renders latent inflammations unaccompanied by the ordinary nervous sensibility, and indomitable by the depletion which generally puts down vascular action. Yet with all these facts before us, we are asked to assent to the opinion that inflammation is in *all* cases essentially the same; that in every instance the smaller vessels are weakened and dilated, the circulation in them retarded.

When we look at the consequences of inflammation and its final cause, we see no better support for the theory we are controverting. Growth we suppose to be an active process, as it is most vigorous in youth and health, most feeble in debility and disease, almost annulled in age. There is a strong analogy between growth and reparation. During the reign of one the other is most powerful. Reparation is essentially effected by inflammation. Growth is not actually inflammation, because there are wanting in it some of the phenomena, and most of the consequences attending that process. But growth, although not inflammation, is a state approaching to it. The vessels in growth become enlarged, the circulation active, the nervous system excitable. The period of growth is the period for phlegmonous inflammation, and, as we said before, for reparative inflammation in its perfection. Here there is a strong analogy between the phenomena displayed by the vascular system in growth and in inflammation. Analogy is not proof, but it is not to be discarded in discussions, and it is always subsidiary to proof. In growth few will pretend to say that the vessels are weakened, for they are then most active, yet in inflammation, analogically comparable to growth, we are told that they are so.

Hitherto we have considered general growth, but the phenomena of partial growth, that of tumours for instance, should not be passed unnoticed. In it the blood vessels become dilated, tortuous, the nervous sensibility occasionally increased. If we admit, and it cannot be denied, that there is general action of the vascular system in general growth, we may well imagine that there is local action of the same system in many instances of partial growth. But it will be found that, by a wise provision, local growth has a still greater connexion with inflammation than general growth. Thus morbid growths have a great tendency to inflame, and to be affected with the consequences of inflammation. Hence nature attempts to destroy them by an extension of the very same process which has produced them.

The original final cause of all inflammation is probably reparation. The good God that created the animal, stamped upon his organization a tendency to actions and a power of originating them, adapted to the repair of a certain amount of injury. But it seems paradoxical to conceive, that what in itself must imply energy and vital power, should be effected by debility of the repairing agents.

The consequences of inflammation are, effusion of the albumen and fibrin of the blood—effusion of pus—effusion of new substances, as of lithate of soda in gout, the ivory deposit in certain cases of diseased joint, the phosphate and carbonate of lime in periostitis—ulceration—granulation and cicatrization—and finally mortification. Some of these processes may argue debility in the smaller vessels, others can hardly do so. Look, for instance, at the inflammation after fracture; see the bone-earth deposited, encased, moulded, and at length fashioned into nearly its natural form and consistence. Here is a process half growth half inflammation; and it does seem to us that the smaller vessels have a power conferred on them which they did not previously possess, rather than that they are deprived of their usual quantum of it. We give this as an apposite example, but the reparative process is in principle the same, whether a bone have been broken or a finger cut, whatever tissue, in short, it is exerted in.

Treatment, philosophically and physiologically considered, is an experiment. The great Bichât looked at it in this light, and in a mood so happy he was prosecuting his inquiry into the Materia Medica, when he fell a victim to his zeal and almost superhuman assiduity. The object of all our theories is the proper and successful application of remedies; the application of remedies not only furnishes a test of the soundness of our theories, but gives us new facts for fresh inductions.

The treatment then of inflammation should teach us something of its nature. It tell us this—that inflammation is not always the same, that acute inflammation is remedied by what empties and relaxes the large vessels and the small—that certain forms of chronic inflammation are best treated by what astringes and gives tone to them. Who does not know that phlegmonous inflammation is best treated by depletion, local, or general, or both; and by the application of warmth and moisture, agents especially calculated to relax. We think this instance sufficient to upset the doctrine which makes inflammation consist in debility of vessels; at least we never heard, nor can our own poor ingenuity devise a satisfactory explanation on such principles. That inflammation is also benefitted by astringents we admit; but it is not that of the most acute kind: and in discussing the proximate cause of inflammation we are taking phlegmonous inflammation as the standard.

We have dwelt enough on this subject. We commenced by alluding to Mr. James's sentiments, and we have been betrayed into an imperfect exposition of our own. We will not sum up with any conclusion, for we honestly confess that the subject yet requires investigation, and that from a man of exact ideas. We think we have said enough to shew that the current doctrine of inflammation is not so consistent nor conclusive as its advocates assert. Our own opinions are of little moment, and we shall not intrude them on our readers; indeed we are too little satisfied with what is known or what we know, to entertain, much more to publish, a definite theory upon the subject. A confession of ignorance is better than a false supposition of knowledge, and the first step towards attaining the latter is to feel assured that we want it.

In the remainder of this short article we shall rather aim at displaying Mr. James's sentiments than our own. As we said before, it is impossible to analyze a work under the circumstances of the present. We may take this opportunity of suggesting to authors who publish much enlarged editions of their works, to adopt some method of marking the new matter. It is utterly impossible for a reviewer to sit down and compare one edition with the other, in order that he may see what is new and what is old. Dr. Abercrombie and others have judiciously distinguished the additions which they have made, to the advantage of themselves, their critics, and the public.

COUNTER-IRRITATION.

The remarks of Mr. James on this point are sensible and deserving of attention. Two many practitioners use blisters, setons, issues, indiscriminately and at random.

> "The subject of metastasis naturally leads to the consideration of another point, namely, the power of artificially substituting one disease for another; for we practically find, that one of the most potent means we possess, consists in establishing a new disease, whereby the other is lessened or removed, by diverting, in fact, the morbid action of the new part.
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> Two principles seem deserving attention with respect to this point; one is, that the new disease be established at such a distance as not to extend its sphere of irritation to the old one, which will then be augmented by it; the other is, to establish a new disease, approaching as far as may be to the probable nature of the old one; thus, when we wish to remove inflammation which has not proceeded to the effusion of lymph or pus, we should excite simple inflammation, as by a mustard poultice or blister; if it has advanced to secretion from a surface, as in an inflamed joint, a blister will be the appropriate remedy; but if we have to contend with a suppuration or ulcer, then a seton or issue, being of the same kind, will be more likely to cause such a disease as will divert the other.

Nature points out, as has been stated, this mode of proceeding, and I may add, that besides simple inflammation, there are many other morbid phenomena, curative of disease, attributable to the same source; thus, we have hæmorrhoids as well as abscess prope anum; we have hæmorrhages from the nose and premature discharges of the catamenia occurring for the relief of other diseases; and hence we also proceed upon the principle of drawing blood or secretions from a distant part, and this is called revulsion or derivation." 152.

To these remarks we would add, that not only the kind of inflammation and its stage, but the tissue affected, should be taken into consideration in directing the particular counter-irritant to be employed. It is well ascertained that caustic issues are more serviceable in ulceration of the cartilages of articulations than in the strumous disease of their bones, although ulceration be present. Again, when we look to the eye, that repository of illustrations of the effects of disease and of medicine, we observe that blisters are by no means so serviceable in the affections of its mucous membrane, as of the more fibrous textures, the cornea, and sclerotica. This subject has not been hitherto sufficiently investigated; but certainly the better it is understood by the surgeon or physician, the more judicious and successful will his practice be.

ANGINA EXTERNA.

We notice the short account of this affection, because we have something to add to it. In order that all our readers may know what angina externa is, we will here insert Mr. James's description of it.

"The patient, a person of unhealthy, and generally of full and gross habit, has a swelling deep seated in the side of the neck, generally towards the angle of the jaw, causing a great degree of pain in that side of the head (most probably from its effects on the nerves of the part), and accompanied with much fever. There is loading of the cellular membrane similar to that we observe in E. phlegmonodes, but limited, firmer and more prominent. This takes place to a great degree, and the result is, that the patient is scarcely able to swallow even fluids; breathes with great difficulty, and cannot sleep from the impending suffocation. The inflammation extends itself internally to the mucous membrane of the fauces and uvula, and thence often to the bronchial membrane; in extreme cases also there is great œdema of the face from the pressure on the absorbents.

The skin, which, if we see the case from the beginning, is then apparently unaffected, soon adheres and inflames, and thickens as it inflames, but does not point, or for a long time show any symptom of pointing, or giving way by slough or ulceration; meanwhile extensive sloughs and noisome pus form underneath, and do great mischief. These abscesses may extend into the cellular membrane, within the upper part of the thorax; and I have seen them form on both sides of the throat.

There is great danger of their destroying life, not only from the direct influence of such injurious matters when confined, but by suffocation, if proper relief is not afforded; and although, if left to nature, they will ultimately burst on the surface, or into the throat, the patient may not live for this to take place.

There can be no question that a free incision here is fully as important as in any case of carbuncular inflammation; and although, from the nature of the parts, the surgeon would be unwilling to do this, if the necessity were not paramount, yet on his conduct in this respect, the life of the patient will mainly depend: a person accustomed to these collections of foul matter beneath thickened inte-

guments, will detect its existence by the peculiar feel of a doughy yielding matter under the tense elastic skin.

The only author who had particularly mentioned this form of inflammation that I was aware of, when this work was first published, was Dr. Kirkland; his description is very brief; he gives one case. There have since been others related which I cannot doubt are of the same nature, although by some they are considered as suppuration of the parotids, which I am apt to believe is very uncommon." 339.

In the first place, we object altogether to the name of angina. The old fashion of giving particular and various designations to the same disease in different parts, though in the same tissue, of the body, has been very mischievous. Men have imagined that such multifarious denominations implied diseases as multifarious, and that cellular inflammation, in one spot, was dissimilar to cellular inflammation in another, because it had received peculiar designations. We object, then, to the term angina, because with angina it has little in common. The affection in question is essentially and really a diffuse inflammation of the deep cellular tissue of the throat. We do not speak from speculation, but from observation; we have seen such cases, and have seen them sadly mismanaged. We remember one very severe instance of this affection. The patient was a gentleman's servant; one side of his face was greatly swollen, as was the front, one side of the neck, and even the lateral and upper part of the thorax. The colour of the integument was dusky red, without the defined border of erysipelas. The swelling was of a boggy character, with distinct fluctuation in one part. The complaint had been trifled with for some days, and the constitutional symptoms had assumed a grave, indeed alarming aspect. Free and sufficiently-deep openings were made, pus, stinking gas, and shreds of sloughy cellular membrane, resembling wetted tow, being discharged or exposed. In the face the mischief was subcutaneous, but extended into the adipose cellular tissue of the cheek, and under the masseter muscle. In the neck the cellular texture under the fascia, and beneath the sterno-mastoid muscle, was the seat of suppuration, &c. Ultimately the patient recovered, but he required much support, and the muscles were laid bare extensively by suppuration. The lower jaw was also denuded; but granulations formed on it, and no exfoliation occurred. We lately saw another case, less extensive because more promptly attended to. In this, the matter passed under the sterno-mastoid muscle; and in order to evacuate, it was necessary to make openings and counter-openings through the fascia. The patient did very well.

We say, then, that this affection is essentially inflammation of the subfascial, inter-muscular, and, secondarily, of the subcutaneous cellular tissue. If moderate, lymph is deposited, and a circumscribed abscess results—if more rapid, or occurring in a bad habit of body, it is not so circumscribed, and extends in various directions. It may pass upwards to the side of the face, as in the instance we have mentioned—or under the angle of the jaw to the pharynx—or beneath the laryngeal muscles, towards the sides of the larynx and œsophagus—downwards to the thorax, where it may be stopped by the deep cervical fascia, or travelling along the exterior of the œsophagus and trachea, it may extend down the posterior mediastinum. All these are not possibilities merely, calculated from a glance at the dead body; they are things which have happened, and will happen again.

As the disease invades the deep cellular membrane, if it does not begin in it, the usual characters of inflammation of that texture will be present. There is more or less swelling, of doughy character, with superficial puffiness or œdema in the first instance; at this time the colour of the integuments is little altered. As the disease extends, the swelling becomes more apparent, still continuing hard or boggy rather than elastic, the subcutaneous cellular membrane is implicated, and there is more œdema or even supparation in it, and the skin assumes a dull inflammatory blush, without the same disposition to vesication, and to a defined and spreading border, observed in erysipelas. At a still more advanced period, the extent of the parts occupied is considerable, distinct collections of matter form, and putrid gas and slough of the cellular tissue are intermixed, communicating, on pressure, a sort of emphysematous crackling beneath the skin.

The local symptoms will depend on the local mischief—its extent, and the parts interfered with; if the neighbourhood of the pharynx is implicated, there will be difficulty of swallowing; if the larynx, dyspnœa and symptoms of laryngitis; and so on. The difficulty of swallowing and dyspnœa are generally present in a greater or less degree. The constitutional symptoms are moderately inflammatory in the first instance—invariably typhoid subsequently.

The treatment is simple, but it must be bold. If the practitioner be called early, large and repeated leeching and antiphlogistic treatment will usually be indicated; bleeding is seldom necessary, or to be recommended. But as soon as induration and bogginess are established, there must be no more delay in resorting to sufficient incisions; we say sufficient, for unless they be carried through the fascia, they are comparatively useless. As soon as adequate incisions have been made, the excitement commonly gives way to depression, and judicious support is demanded. We have thrown together these few observations, because we think Mr. James's account of this affection incomplete, whilst it is indispensably necessary to the surgeon to be accurately acquainted with its characters and treatment.

Carbuncular Inflammation on the Fingers.

"There is a kind of carbuncular inflammation which occurs on the fingers, not true paronychia, for it is unconnected with the nail, and equally so with the thecæ. It occurs often on the back of the first or second phalanx: it is dusky, excessively painful, and throws up a livid pustule or phlyctena. It may often be imputed to some morbid poison, but I have seen it occur where there was no reason to suppose this. It happens to persons of a bilious temperament and spare constitution. A very foul, sloughy ulcer ensues after the pustule is broken, [illegible] a core is often discharged.

Sometimes an incision gives great relief, but I have also seen it aggravate the pain and inflammation. Poultices with opium, entire rest, purgatives, and opium to relieve pain, are necessary; and to the ulcer when formed, sometimes escharotic, at others sedative applications agree best. I may also mention the arsenical lotion.

These seem to bear the same relation to carbuncle, which whitlows in the last phalanx do to boils." 345.

There is another kind of affection of the fingers which we have seen on one or two occasions. It resembles what has been termed the subcutaneous tubercle, the produce of cachexia. At first a small tubercle appears to form under the skin, usually on the backs of the phalanges; the skin becomes blueish; matter is secreted and the skin ulcerates, and a small circular, whitish, indolent-looking sore, capable of holding a small pea, is the consequence. Many of these sores exist at the same time, one appearing as another is healing up. The circulation is usually bad, the hands and feet cold and purplish, the pulse weak, the whole system languid. What the disease is owing to is difficult to determine. It will exist for two or three months, and then there will be an interval of variable duration before it reappears, to run nearly the same course as before. We have found the decoctum sarsæ comp. with the volatile alkali, the most efficient remedy.

INFLAMMATIONS FROM POISONS.

Poisons, it is well known, are derived from the animal, vegetable, and mineral kingdoms. The former differ from both the latter in being followed by secondary symptoms, and it is clear, from the differences exhibited by those secondary consequences, that the animal poison is not a mere irritant to this or that tissue, but exerts a specific influence. We shall not say more of morbid poisons, than that they form a study of themselves. Man furnishes morbid poisons for man, and some can be communicated independently of inoculation or actual contact. But the morbid poisons fabricated by other animals can only, so far as we know, be communicated by contact, or, in the majority of instances, by direct inoculation. The most formidable animal poisons of this description are those of the snake and of rabid animals. On the latter we need not descant. The bite of the viper being that, among the former, which is observed most frequently in this country, we are tempted to extract Mr. James's brief exposé of the symptoms which follow it, and of the remedial means which have been recommended and employed for it.

> “ Sudden and great swelling takes place in the part (probably a hand or foot), in the limb, and very speedily in the adjacent part of the trunk. The inflammation appears to affect all the tissues, and very notably the cellular membrane; the skin also is much implicated, the cuticle separates in phlyctenæ, and a remarkable tendency to ecchymosis exists, even to a great distance, in that portion of the body which is affected continuously by the poison, probably from the tone of the vessels being much broken down. Nothing can be more formidable in appearance, and sometimes in reality, than this inflammation, although when produced by the viper it does not often prove fatal.* Not unfrequently, however, some portions of the integuments fall into gangrene, especially in the neighbourhood of the bitten part; but in all cases, resolution takes place through a great portion, if the person survives.
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> The affection of the general system so speedily follows the bite as to give great reason for the belief that it does not proceed so much from sympathy with the local disease as from the absorption of the poison. Great depression, tendency to syncope, vertigo, sickness and vomiting of bilious matter, cold sweats,

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* “ The danger will depend, *cæt. par.*, upon the vigour of the poisonous animal, and the relative feebleness of the recipient.”

small pulse, and occasionally pain about the navel, are the result, and may increase to a fatal termination, which often occurs in a very short time from the bites of the more venomous serpents; but from that of the viper recovery commonly takes place, and the symptoms begin to subside sooner than might be expected from their severity and the extent of the local disease: they often cease to be formidable within two or three days.

The treatment in these cases consists, 1st. In preventing the communication of the poison to the system. 2d. In moderating its local effects by local applications. 3d. In general remedies.

The first object may be attempted either by the immediate excision of the bitten part, by sucking out the virus by the mouth or cupping-glasses, or by its destruction in the wound by caustic; for which purpose M. Boyer, in his Traité des Maladies Chirurgicales, has recommended the introduction of some liquid caustic into the orifices so as to convert them into sloughs. He employs the muriate of antimony, sulphuric or nitric acid, inserted into the wounds, on wood properly shaped.

This object may be further attempted by arresting the progress of the virus after it has been absorbed, by the application of bandage or ligature, and it is not deemed necessary for this purpose to intercept the circulation altogether. In cases where ligature is used, a portion only of the virus seems to operate on the nervous system, and its effects may then be successfully combated. Of this mode of treatment, we have an interesting account by Dr. Butter, in the second volume of the Calcutta Transactions.* The only objection which suggests itself is the increased chance of mortification in the part: it however appears probable that Nature has the power of conquering those poisons which do not destroy the individual too soon, and that, perhaps, in the part as well as in the system.

The second object, that of overcoming the local effects by local remedies, is attempted by a practice which has resulted from observation. Certain medicines, especially ammonia combined with olive oil, and employed with friction, appear highly serviceable: the ung. hydrarg. is also an application of considerable efficacy. Indigo and many other applications are recommended.

The third purpose is accomplished by supporting the powers and stimulating the nervous system; for this end, ammonia, eau de luce, brandy, mulled wine, laudanum, warmth, frictions, &c. should be employed. Dr. Butter also walks his patients about, as in cases where an overdose of laudanum has been taken, until the patient rallies, and then removes the ligature.

Another plan consists in giving medicines which have some specific quality. The serpentaria has been used with this view; but it probably deserves to be regarded only in the light of a useful stimulus; the guaco is much spoken of, and arsenic has also been freely exhibited, and, it should appear, with much success: from the accounts we have received it is well deserving a trial." 259.

We have an observation to offer respecting the application of escharotics to poisoned wounds. The only experience which we have had of them has been in wounds received in dissection, and that experience makes us decidedly averse to their use under those circumstances. We have seen a most troublesome, ugly sore result from the application of the nitrate of silver to a dissection-wound, and unirritating treatment has always seemed to us the best. Yet here we have reason to believe that an animal poison is received, and, from analogy, we should imagine that the same results would follow in the case of a viper or snake-bite. Analogy, however, is not proof, and the matter must be decided by the balance of evidence. If testimony goes for any thing, arsenic should be the most potent remedy in snake-bites; its reputed effects, after wounds inflicted by the serpent of St. Lucia, are well known to professional readers.

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* P. 221-2.

In the stings of gnats, hornets, &c. Mr. James has seen great relief afforded by gently rubbing the part with ung. hyd. and applying extensively a lotion composed of liq. ammon. subcarb. ʒij. aquæ, ℥vj. to the surrounding parts.

Vegetable poisons are seldom very injurious, unless when introduced into the cellular tissue, or applied to parts deprived of cuticle. Even here they act for the most part as mere irritants. Thus port wine and water, injected into the cellular tissue of the scrotum, will kill it; but port wine and water is certainly not a poison under ordinary circumstances. The reason why it kills the cellular texture, is because this possesses a low degree of vitality, and it is destroyed by the injection, which scarcely produces inflammation enough in the tunica vaginalis. Mr. James remarks, that neither urine nor wine will always occasion sphacelus of the cellular membrane, if they do not continue long in contact with it, and, therefore, that the earlier incisions are made to evacuate the fluid the better. This is most true and most important; and we would repeat most emphatically, the earlier and bolder the better.

Mineral poisons act variously, according to the chemical affinity of the agent with the living tissue. Nitric acid and the caustic alkali produce very different sloughs; the former destroys what it comes into contact with, the latter combines with it chemically, and is, consequently, a penetrating caustic. Thus, an issue made with the former is usually of determinate depth—with the latter, it may pass much more deeply than the inexperienced operator would imagine. The tartarized antimony appears to us to act on a particular texture, and it is well known to produce occasionally a sort of secondary eruption of pustules. The texture on which it more immediately acts seems to be the glandular system of the hairs. If a pustule, produced by tartar-emetic, be carefully examined, it will invariably be found to contain in its origin a hair in its centre; such, at least, has ever been the case when we have had the curiosity to inspect it. Arsenic exerts something like a specific operation, producing, when introduced into a wound, inflammation of the mucous membrane of the stomach.

Our limited space compels us to close Mr. James's volume. We recommend it warmly to the attention of students, both in practice and out of it. There is much information to be derived from it. It is not without faults, but they are infinitely overbalanced by its merits; and again we repeat our hearty commendation, and recommendation to our junior brethren to peruse it. It is a pleasant thing to see our provincial surgeons exerting themselves, to prove that knowledge is every where diffused among the ranks of our intelligent profession.

XI.

DR. STEVENS ON THE BLOOD.

Continued from page 336.

> "At the last meeting of the magistrates of the county of Middlesex, it was unanimously agreed, that a vote of thanks, and a piece of plate of the value of one hundred sovereigns, should be presented to Dr. Stevens, for his attention to the sick, and the great success which had attended the saline treatment, in the prison of Cold Bath Fields. Another piece of plate, of the value of fifty sovereigns, is also to be given to Mr. Wakefield, surgeon to the prison; and another of the value of twenty-five sovereigns, to Mr. Crooke, a young gentleman who lived for several years with Dr. Stevens in the West Indies, and is now a student of medicine in the London University. Small sums have also been awarded to several of the nurses; and some of the prisoners, who rendered themselves useful by their attendance on the sick, are to be recommended for pardon, through the magistrates, by the Secretary of State."—*Med. Gaz. June* 2, 1832.

Orpheus, whose fiddle moved the trees and stones, was after all but a bungler when compared with Dr. Stevens. HE has moved Sir Peter Laurie.

Dr. Stevens proceeds to mention the success attending the saline treatment of Mr. Whitmore and Mr. Marsden. As, however, we consider the institution immediately under Dr. Stevens' own care, as affording the best means of testing his own practice, we shall leave those gentlemen without further notice. We have brought before our readers the whole of the Cold Bath Fields case as stated by Dr. Stevens himself, and we have shewn that, even reasoning on *his own* statements, the result is rather against his practice than for it. But this is the most favourable side of the question.

The Board of Health being constantly dinned, no doubt, with the success of Dr. Stevens, determined, very properly, to investigate his statements. The result must have been distressing to the feelings of the saline party.

In the Lancet for July 14th, 1832, there is a communication from Sir David Barry, stating the results of a visit which he made to the Coldbath-Fields Prison, on the 27th and 28th of June.

> " On the night of the 25th of June ult., in a casual conversation with Dr. William Stevens at the College of Physicians, I learned, with no small astonishment, that he had seen upwards of forty cases of cholera in Coldbath-Fields Prison within the preceding 24 hours. Struck with this formidable announcement, I requested permission to see these cases with the Doctor next morning, but could not obtain an appointment with him earlier than for the 27th.
>
> On that day I proceeded to the prison rather in a private than official capacity, accompanied by Dr. O'Shaughnessy, whose 'Report on the Chemical Pathology of Cholera' entitles him to such high consideration in everything connected with what has been lately denominated the saline treatment of that disease.
>
> Dr. Stevens conducted us round all the wards appropriate to cholera patients. On leaving the prison, at about half-past two o'clock, p. m., I observed to him, in presence of Dr. O'Shaughnessy, that I had seen no case of cholera in the prison that day—meaning, as Dr. Stevens appeared to allow at the time, that I had seen none actually labouring under the characteristic symptoms of the disease." 455.

On the morning of the 28th a note was addressed by the Privy Council to the governor of the prison, requesting to be informed whether the statements in the newspapers respecting the frightful extent of cholera in the prison were correct. To this the governor replied that unfortunately much of the newspaper statement *was* correct, the number of persons then labouring under the disease in its various degrees being about seventy. In consequence of this deplorable insalubrity Sir David Barry was officially desired to visit the prison, which he did on the 28th inst. It will be recollected that his previous visit with Dr. O'Shaughnessy, on the 27th, was a non-official one, and it will also be remembered that at that non-official inspection of the 27th he declared to Dr. Stevens that he had not seen one case of cholera. There must indeed then have been grounds for serious alarm, when Sir David Barry finds no case of cholera on the 27th, and the governor of the prison, acting no doubt on information derived from the medical attendants, declares on the 28th that there are seventy. When pestilence rears its head with so appalling a front, it well becomes His Majesty's Government to institute an official investigation. The volcano, we suppose, alluded to by Dr. Stevens, had begun to discharge in the night of the 27th.

The minutes of the official visit shall be given in Sir David Barry's words.

"Coldbath-Fields Prison, June 28th, 1832.

"*Notes.*—Visited the wards appropriated to cholera patients in this establishment at half-past four o'clock, accompanied by Deputy Inspector General of Hospitals Maling, and Staff-Surgeon Macann, conducted by the governor of the prison, and two visiting magistrates.

Saw all the wards in which persons said to be labouring under cholera were treated, and examined individually all those said to be on the sick list, then present.

1*st Ward visited.*—Nine patients. One man who had been four days under the saline treatment for premonitory symptoms had been attacked this morning, after having been discharged from hospital. A genuine case. Attempts were making, *by a young man of colour*, to introduce the tube for saline injection into one of the veins at the bend of the arm, under the direction of Mr. Wakefield. *Tube could not be introduced, as I learned afterwards.* Fluttering pulse, livid and sunk countenance. This case will most probably prove fatal. Another man in this ward, looking thin, pale, depressed, hollow eyes, but good pulse, is under saline treatment. *When I saw him about half an hour afterwards, his tongue was cold, with a weak slow pulse.* Ward small for the number of beds; *close, hot, and oppressive, with a very large fire.*

2*d Ward visited.*—*Eighteen* persons *said* to be on the sick list in this ward. *Two only present, boys, apparently well.* This ward consists of two rooms; the inner a narrow slip. The *sixteen* not present were said to be *out walking*.

3*d Ward called* '*No.* 5.'—Six patients on the *Cholera Hospital Book*. Five present. *One man complains of constipation of the bowels. One boy has had pain in his side and head, now better; no vomiting or purging. No appearance of cholera in the others at present.*

4*th Ward visited.*—Eleven patients. All present. One boy with slow pulse, and depression of look and spirits; may have an attack in the course of the night. *All the others looking well, with no appearance of disease of any kind.* Informed by Mr. Wakefield, the surgeon of the establishment, that the diet of the cholera patients consists of arrow-root, tapioca, beef-tea, coffee, and Seltzer-water for drink, *ad libitum*, a wine-glassful at a time.

Convalescent Ward.—Fourteen patients. All looking well.

Female Ward, No. 1.—Nine patients—all looking well. One young woman, apparently *simulating cholera;* warm skin, good pulse and tongue. Said to be a very troublesome perverse character.

Female Ward, No. 2.—Nine patients. One now in mild fever. Said to have been a severe case of cholera. *One young woman with bad toothach.*

The two men in No. 1, already mentioned, are the only cases which I saw with the appearance of cholera. Yet the governor assured me repeatedly, that he had shown me *all* the persons considered by the medical gentlemen as labouring under any stage of the disease, and referred to in his letter of this day to Mr. Bathurst.

The utmost cleanliness, regularity, and discipline, appear to prevail in every part of the prison, as far as I was able to judge; and the visiting magistrates, who went round the wards with us, seemed to be actuated by the most humane feelings, and to devote much time and attention to the health and comfort of the prisoners.

No new case admitted this day. (Signed) D. BARRY.
JOHN MALING.
F. MACANN.

It is almost needless to observe, that no part of the preceding notes or statements is meant to refer to any time or circumstances connected with the patients, anterior or posterior to the moments at which they were seen by Dr. O'Shaughnessy, Mr. Maling, Dr. Macann, and myself. D. B."

Now we appeal to the profession whether there was not indeed a necessity for instituting a full inquiry. On the 26th Sir David Barry is told by Dr. Stevens that he had seen forty cases of cholera in the previous 24 hours. On the 27th he visits the warehouse, and finds *not one*. On the 28th the Government is informed that there are seventy cases in the same establishment; on that very day Sir David Barry goes and finds just two. Out of 18 cholera patients in one ward (18 of those who, Dr. Stevens has formerly said, could not be cured by ordinary remedies, and one half of whom should, according to Mr. Wakefield, die) 16, proh nefas! are taking a walk. Out of six in another ward one man is constipated, one boy has pain in his head, three have no appearance of cholera, and the other is not to be seen! Out of 11 in another ward, 10 look well and have no disease of any description. In a female ward, we have nine patients, all looking well, plump, and hearty, no doubt fattening on the pestilence. Out of nine in another ward one has mild fever, and one has, *risum teneatis?* a toothache. Can we wonder that Dr. Stevens, Mr. Wakefield, and Mr. Crooke obtained from the magistrates that better reward than empty praise, the solid pudding of three pieces of plate. Must not every humane and philanthropic mind rejoice that a pestilence so fearful, a visitation so awful, should have been, under Dr. Stevens and the magistrates, the means of liberating from durance vile a few deserving persons, whom the hardship of the laws and the vicious injustice of society had immured? Out of evil indeed cometh good.

Perhaps it may be said that, at the time of Sir David Barry's official visit the disease was on the decline; that the persons who were walking, talking, suffering from tooth-ache, constipation, or nothing, were, in point of fact, triumphant living witnesses to the might and majesty of the saline treatment. But this will not do; for, on the very morning of that visit the governor of the prison writes to the Privy Council to state that "*unfortunately* much of the statement from the *Globe* newspaper is correct," and that "the number of persons *now labouring* under the disease, in its various degrees, is about seventy." From this it is evident—that the Governor, acting of course on information derived, in one way or other, from the medical attendants, considered the pestilence as *then* prevailing, and the epithet "unfortunately" must *unfortunately* convince every rational person that it was by him considered in a serious light, probably as serious as at any preceding period.

But this is not the whole of this extraordinary farce. The magistrates who had *plated* Stevens, Wakefield, and Crooke, finding that Sir David Barry's statement made them cut a figure bordering on the ridiculous, determined to put down by the weight of their wigs the saucy impertinence of a few doctors. Accordingly these magistrates held a meeting on the 7th of July, for a report of the absurdities at which we must refer to the newspapers of the day. Sir Peter Lawrie, "a name to science ever dear," especially patronized Dr. Stevens, and dubbed him a second Jenner, an exterminator of pestilence, a missionary from Heaven for the protection of man. To all this we have no objection, as Dr. Stevens possesses as good a right to the receipt of these various orders, as Sir Peter Lawrie has to the conferring of them. Another of the magistrates, Mr. Rotch, made a more specific statement, which can therefore be met by a specific answer. In alluding to the official visit on the 28th June, he asserted that it was *superficially* conducted, and much incredulity was manifested by Sir David Barry. Now our readers will remember that the visit of the 28th was Sir David's second, his first having been on the 27th in company with Dr. O'Shaughnessy. Fortunately, notes of this visit were preserved, and were published immediately on the notification of the magisterial charge. In the Lancet of July 21st, there is the following letter from Sir David Barry; it is the minute of the before-mentioned visit on the 27th inst. and serves to complete the annihilation of the saline humbug.

"June 27th, 1832, visited the Coldbath-fields prison this day, at two o'clock, accompanied by Dr. O'Shaughnessy. Learned from the Governor in his office, that the population of the prison at this moment is about eleven hundred of both sexes, including twenty-one children, that the daily discharges and admissions are about thirty-five on the average; the whole composed of malefactors, vagrants, and paupers; that the daily allowance of food to an adult is (since the introduction of cholera) 1¼lbs. of bread, 1 pint of gruel, 1 pint of ox-head soup, 6 ounces of boiled meat, four times a week, free of bone, and weighed after having been boiled. No soup on meat days.

That the deaths during the spring, summer, and autumn months last year, were only two; during the whole of last year, fifteen. That since the 3d June, there had been twelve deaths, all from cholera. That the present state of cholera cases in the prison is as reported to him, the Governor,

Men, 55 cases. Women, 15 cases.

That he had not lately seen them; he could be of no service, *and was recommended not to go into the cholera wards.*[*]

Walked with the Governor, Dr. Stevens, and Dr. O'Shaughnessy, round the gardens and other open spaces within the walls, and recommended the prisoners' rooms to be thinned by encamping a part of the inmates in the gardens.

Dr. Stevens, with his two assistants, then conducted Dr. O'Shaughnessy and myself round his cholera wards, in which there might have been thirty or forty patients, *but not one in the collapsed stage, though thirteen cholera cases are stated to have been admitted this morning.*

There certainly was *not a single case* which from any symptoms witnessed by me *I could point out as a case of cholera.* I afterwards made the same observation to Dr. Stevens in the presence of the Governor and Dr. O'Shaughnessy. I repeatedly begged Dr. Stevens to show a recent case, a case of confirmed cholera —a case of collapse. He replied it was *unlucky* I had come that day,* and there was no case of collapse then in the house, and remarked that by his treatment, *he prevents their ever coming to the collapsed stage.* Yet twelve have died since the 3rd, two of whom died the day before yesterday; and he (Dr. Stevens) allows that several became collapsed after having been admitted into the hospital of the prison, *consequently while under the saline treatment.*

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[*] "The Governor accompanied me round the sick wards on the 28th, but not on the 27th June."

One boy admitted this morning, in bed, *has had neither vomiting nor purging,* and presents a steady pulse.

Two persons looked pale, sallow, and with sunken eyes, as if they had suffered some severe evacuations, but the pulse in both is good. Seltzer water is given as common drink.

Recommended grated openings to be constructed in the walls of the small yards and rooms on a level with the floors. The air in these places being more or less stagnant to a height of eight feet at least.

Dr. Stevens, during our visit to the prison, and afterwards on the way to the Regent's Park, repeatedly asserted, that two-thirds of the patients which he showed us, *would* have fallen into collapse, and *would* have most certainly died if subjected to the ordinary plans of treatment by calomel, opium, stimulants, &c. In short, that the present usual mode of treating this disease *is absolutely poisonous.* When asked if he had ever seen even one case of blue collapsed cholera saved, that had been treated by the twenty-grain doses of culinary salt, and by nothing else, he candidly admitted that he never had, for that he recommended, in addition to the salt, *large mustard poultices, hot* saline and *opiate enemata,* and *hot* salt and *water-baths, friction,* &c.

The substance of the above notes was written in the prison, or immediately after returning from it, and in their present state were read by Dr. O'Shaughnessy, previously to the publication of Stevens' work on the blood.

D. BARRY, M.D.

I have read the above notes, which I saw several days since, and have to state, that they are accurate in every respect.

16th July, 1832. (Signed) W. B. O'SHAUGHNESSY, M.D."

It was indeed "unlucky" that Sir David Barry went—unlucky for salines —unlucky for the Doctors—unlucky for the renown in futuro, and éclat in præsente, which the firm in Coldbath-Fields fondly hoped to acquire.

We shall not pursue this ludicrous, or rather melancholy subject any further—we shall not trust ourselves with the expression of what we think or what we feel. We turn from the whole affair with mingled sensations of pity and disgust, and the best that can be hoped for the "saline treatment" and its authors is, that both may be speedily forgotten.

We have cautiously abstained from discussing the question of saline injections into the veins in the treatment of cholera. We certainly do not anticipate any thing from this plan, and we feel convinced, from what we have seen and read, that it will ultimately be given up. But this stands on a very different bottom from Dr. Stevens's saline treatment—it is advocated by a very different description of persons, and supported by a very different kind of facts.

It may seem to many of our readers that, in reviewing Dr. Stevens' book, we have adopted a more severe and menacing tone than is our usual practice. We acknowledge the fact. It is neither our habit nor our inclination to be severe—we feel no pleasure at others' pain—we cannot contemplate with gratification even the writhings of a worm. But there are occasions on which leniency is criminal, and such an one we have deemed the present. Dr. Stevens will in future understand that forbearance is not always weakness, and that because a reviewer does not often use the lash, he is therefore inexpert in its employment. We know that although ourselves may be insignificant we wield a mighty power, and we trust that we entertain a due sense of our responsibility. The press is almost omnipotent for good or for evil, and Dr. Stevens might as well dream of contending with the Atlantic, as with Justice and the press together. We take our leave of Dr. Stevens, in all probability for ever.

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* "I had come, by appointment, with the Dr. himself, made on the 25th at the College of Physicians."—D. B.

XII.

A Compendium of Human and Comparative Pathological Anatomy. By *Adolph Wilhelm Otto*, M.D. Royal Medical Counsellor in the Medical College of Silesia, &c. &c. Translated from the German, with additional Notes and References, by *John F. South*, Lecturer on Anatomy at St. Thomas's Hospital. Octavo, pp. 456. London, 1831.

This excellent work has only been lately placed in our hands, and we cannot delay expressing the high opinion we entertain of it. It is a refreshing thing to turn from the contemplation of works like that reviewed in our last article to productions of sterling merit. A compendium like this is of course insusceptible of analysis or review, and can only admit of a notice in a periodical journal. But it is not on that account the less valuable, and we do not hesitate to say that no scientific physician or practical surgeon should want it in his library.

In order to afford an idea of the nature of the volume, we first shall present the subjects treated as they appear upon the page of contents, and then subjoin a specimen or two of the mode in which those subjects are handled. We have little to say in addition, but we cannot refrain from expressing our satisfaction at the manner in which the original of Dr. Otto has been translated by Mr. South. The latter gentleman is already favourably known to anatomical students, and the present publication will enhance his claims to their approbation. The Borough and London University Schools are at present taking a decided lead in the medical education of the metropolis, and when we turn our eyes to the West, we look in vain for even the shadow of the glory of Baillie and the Hunters. New buildings indeed we see, but the whitewash upon them is fresh, and the memory of former days finds no sacred spot to linger in. It is with feelings of melancholy that we see the West End School, to which our own youthful recollections are attached, vailing its head to the increased intelligence, and activity, and talent of the East.

Vale, vale domus nostra!

But we turn to another, and, may we be permitted to say, a less painful subject. General anatomy has been hitherto neglected in this Country;—there is no denying nor apologizing for the fact. Our students were *ground* for the College; and, after shuffling through the examination of that body, they hurried into practice, regardless of all but the means of making money. Hence the grovelling, ignorant, abject, contemptible creature, which the world often found the routine practitioner, and hence the debasing but far too faithful picture which the novellist and dramatist have drawn. With the great and general improvement of medical education, the method of teaching anatomy may readily be supposed to have undergone some alterations. Those alterations have been partly for the better, partly for the worse. Special anatomy is taught less rigorously, but general anatomy is more regarded. Till very lately we had no English system of general anatomy, but lately Grainger's has been published, and this was followed by the pathological anatomy of Craigie. We should not be doing justice to them if we did not express our approval of their labours—we should not be doing justice to ourselves, if we said that they are what the honour of English medicine demands. They are *not* national works, they are not to us what Bichât's was to France. Under existing circumstances we must be content with what we can get, and original productions being scarce, we must e'en import from abroad, for a good translation is not the less useful because it humbles our national pride, and exposes our national weakness. The causes of the decay of anatomical research amongst us are neither very numerous nor obscure. They are to be found in the present constitution of society in this kingdom, in the circumstance of wealth being considered the great good, whilst only successful practice can lead to it. Hence ambitious and talented men leave the dissecting-room for appointments to hospitals, and the career of private practice. This is a subject deserving more attention than it has received, but we cannot pursue it any farther at present.

The work before us is divided into two parts, one general, the other devoted to the consideration of the particular organs and tissues. The contents of the first part are as follows:—Of the Vices of Animal Organization in general—Of Vices relating to Number—Of Vices relating to Size—Of Vices relating to Form—Of Vices relating to Position—Of Vices relating to Connexion—Of Vices relating to Colour—Of Vices relating to Consistence—Of Vices relating to Continuity—Of Vices relating to Texture—Of Vices relating to Contents. From the foregoing enumeration it will be seen how comprehensively the general question of the vices of organization is considered. We shall now shew the contents of the Second, or Particular Part.

FIRST BOOK.

OF THE PARTICULAR ORGANS, ON THE ORGANIC SYSTEMS.

" TWELFTH SECTION. Of Cellular or Mucous Tissue.

THIRTEENTH SECTION. Of Cellular Membranes.—*First Chapter*. Of Serous Membranes. *Second Chapter*.—Of Mucous Membranes. *Third Chapter*.—Of External Skin.

FOURTEENTH SECTION.—Of Horny Tissue. *First Chapter*.—Of the External and Internal Cuticle. *Second Chapter*.—Of the Nails and Hoofs. *Third Chapter*.—Of Hair and Feathers.

FIFTEENTH SECTION. Of the Bony System. *First Chapter*.—Of Bones in general. *Second Chapter*. Of Bones in particular.—A. Of the Bones of the Head.

B. Of the Bones of the Trunk. C. Of the Bones of the Upper Extremities. D. Of the Bones of the Lower Extremities.

SIXTEENTH SECTION. Of the Cartilaginous System.

SEVENTEENTH SECTION.—Of the Fibrous System in general, and of the Joints in particular.

EIGHTEENTH SECTION.—Of the Muscular System.

NINETEENTH SECTION.—Of the Vascular System. *First Chapter.*—Of the Pericardium. *Second Chapter.*—Of the Heart. *Third Chapter.*—Of the Arteries. *Fourth Chapter.*—Of the Veins. *Fifth Chapter.* Of the Lymphatic Vessels and Glands.

TWENTIETH SECTION.—Of the Nervous System. *First Chapter.*—Of the Brain. A. Of the Membranes of the Brain. B. Of the Brain itself. *Second Chapter.*—Of the Spinal Marrow. A. Of the Membranes of the Spinal Marrow. B. Of the Spinal Marrow itself. *Third Chapter.*—Of the Nerves."

As a specimen of the manner in which the subjects are handled, we subjoin the section on Alterations of Colour. Yet it is not a fair sample, for, independently of being selected at random, we are constrained for want of space to omit the referential notes, which equally evince the great labour of the author, and enhance the value of the work to the purchaser.

" *Of Vices relating to Colour.*

The IRREGULAR COLOURING of animal parts is very frequently conjoined with vices of texture, and may then consist, as in scirrhus, in the change into fat, in ossifications, &c. in diminution of colouring; or as in inflammations, caries, cancer, mortification, &c., in the deepening of colour, and frequently also in an entirely different colouring. But this abnormal colouring can also occur without any, or at least without any visible vice of texture, and then for the most part depends upon change in quantity or quality of the colouring fluids found in the organs, and especially of the blood.

First, as to what concerns diminished colouring; this is itself sometimes original; thus a particular part does not possess the proper degree of colour belonging to it, and remains pale as in the embryon, such is one kind of retarded formation; yet, however, deficiency of texture is usually connected with this state. To this belongs, also, the more common state of ALBINOISM, *leucæthiopia*, *leucopathia*, *albinoismus*, which occurs both in man and animals, in which the skin, the hair, and the eyes, are found unnaturally pale; this morbid state is sometimes hereditary in man, but more frequently in animals, and in the latter, then produces distinct varieties.

Unnatural paleness is more generally an acquired diseased state, a change of colour or bleaching, and is especially produced by a diminution of the blood generally, and of its *cruor* in particular, on which account it is the usual attendant of long continued disease, of cachexia, and especially of consumption and dropsy. To this place also we refer the more local change of colour, viz. in the skin of coloured persons, the change to grey and white of the hairs and feathers, the bleaching of dark eyes, &c.; the cause of this bleaching of the above-named parts is found in the diminution or total removal of the colouring matter. The frequent loss of colour in the mucous membrane of the mouth, and of the alimentary-canal after poisoning with the concentrated acids and with tartar emetic, is also worthy of notice.

The abnormally increased colour of an organ, or the DEEPENING OF ITS COLOUR, depends in some cases, and especially in muscles originally pale, upon hypertrophy; but most commonly on the gorging of a part with blood, which has been augmented in it by congestion and stagnation, *stasis*; this is very often observed in the lungs, the liver, the spleen, and the mucous membrane of the alimentary canal. Sometimes it happens that the congested blood is itself unnaturally deep coloured, and thus doubly deepens the colour of the part in which it is collected; this is especially the case after suffocation, apoplexy, poisoning with narcotic substances, and hydrocyanic acid, adynamic fevers, and especially in the blue disease. A red or bluish colour is often observed in certain parts of the body, produced by congestion of blood in the most delicate vessels, for instance, DEATH SPOTS, *lividitas*, *nigror*, *sugillationes spuriæ*, the form, extent, and colour of which are very variable, according to circumstances; further, we notice similar red and dusky spots on the internal parts, arising from the same causes, as on the intestines, and more especially on their mucous coat; and the dusky colouring of those parts into which, if they be lowest, the blood sinks according to the laws of gravitation; such spots are produced, even sometime after death, on the putrefaction and thawing of frozen corpses.

From this kind of dusky spots we must distinguish other similar colourings which originate in the percolation of the darker juices after death; thus we sometimes observe in persons who have died of inflammation of the lungs accompanied with their adhesion to the pleura, large livid or violet-coloured spots on the chest; on the stomach there are seen dusky red spots, where it is in contact with the blood-gorged liver and spleen. The large venous trunks filled with blood often colour the neighbouring parts, and the gall-bladder very frequently tinges a part of the adjacent stomach and duodenum with its bile. Sometimes, also, the naturally pale surfaces immediately in contact with the blood become equally red, for instance, the inner surface of the heart, the great arterial trunks, the rectum in piles; a peculiar change in the blood seems to be the cause of this colouring.

A particular kind of deeper colouring is also produced by EXTRAVASATION, *ecchymosis*, *ecchymoma*, *effusio*, *suffusio*, *sugillatio*, either under the skin, or more deeply, but which differs from the above described similar spots, as it is produced by the actual effusion of blood from the vessels into the cellular membrane of the part. This usually accompanies a BRUISE, *contusio;* but it is not unfrequently consequent on severe strains of a part, on suckling in delicate skinned women, on great muscular exertions, on coughing, vomiting, and on many diseases, especially scurvy, petechial fevers, the morbus hæmorrhagicus of Werlhof, &c. These extravasations are at first blackish or blue, and distinctly circumscribed, but by degrees become more extended, as it were, fade, and by little and little assume a violet, greenish and yellow colour.

Further, the irregular colouring of animal bodies is often caused by the reception of various extraneous colouring matters into the body. This is observed almost generally in the lower animals, especially in the parasitic, when living on different kinds of food; also locally, as the consequence of various medicines and poisons; thus the bones of men, beasts and birds, are more or less reddened by food of a red colour. The taking of rhubarb often tinges light parts yellow; hydrocyanic acid renders many organs bluish or greenish; nitrate of silver, quack medicines, of which the composition is unknown, and other medicines, often render the skin blackish.

Finally, we oftentimes observe some peculiar colouring matter or pigment spontaneously produced in animal bodies, and colouring certain parts more or less completely; such is the case in jaundice, *icterus*, and in *melanosis*. In the former disease there is formed in the body of a yellow animal extractive or colouring matter, which has great similarity to the pigment of the bile, and tinges almost all the solid and fluid parts of the body more or less yellow and dusky, however, so that many of the systems assume a yellow colour more frequently than others. Diseases of the liver, asthenic fevers, as the plague, the American yellow fever, typhus fever, &c. are commonly attended with jaundice; the same also occurs in animals, but much less frequently. In *melanosis*, on the contrary, a deep brown or more frequently a blackish tinted pigment is morbidly produced, which occurs sometimes generally, sometimes to a limited extent; in the former, it is either mingled with the particular excretions, as the urine, the perspiration, the mucus from the lungs, in certain cases also, perhaps (in the matter evacuated) in *Melæna*, or the BLACK DISEASE of Hippocrates, and colours them blackish; or it may be deposited as a fluid or semi-coagulated mucus on the expanded surface of serous membranes, particularly the peritoneum and pleura. In the confined state the black pigment is found accumulated either in the otherwise healthy substance of an organ, especially of the skin, of the lungs, of the bronchial glands, &c. or it may accompany the various vices of texture, as mortification, particularly of the dry kind, false membranes, soft swellings, scirrhus, cancer, medullary sarcoma, and most commonly, at least in animals, tubercular swellings."

We again recommend this volume very cordially to the student, the surgeon, and physician. We have placed it in our own library as a standard work.

XIII.

The Anatomy and Physiology of the Organ of Hearing; with Remarks on Congenital Deafness, the Diseases of the Ear, some Imperfections of the Organ of Speech, and the proper Treatment of these several Affections. By *David Tod*, Member of the Royal College of Surgeons. Octavo, pp. 147. London, 1832.

It has long been a matter of complaint that our knowledge of the diseases of the ear is limited and imperfect. The cause is to be found in the intricate arrangement of the organ itself, and the difficulty of procuring accurate and satisfactory examinations of its condition after death. The cultivation of morbid anatomy which has done so much towards advancing our knowledge of the diseases of other parts, has contributed but little to the increase of our information or the improvement of our treatment in acoustic surgery. Mr. Tod, the author of the little work before us, appears to have engaged with much zeal in the investigation of the healthy structure and physiology of the organ of hearing. As such researches do not come within the scope of a medical review, we must content ourselves with recommending such of our readers as take an interest in anatomical questions to peruse the work itself. We can merely notice some remarks on the diseases of the ear.

Mr. Tod gives some cases of fungus of the meatus which were cured, as they generally are, by removal of the fungus and the subsequent application of the lunar caustic. We have seen many instances of this description, and, so far as we recollect, all yielded to the application of the lunar caustic, with occasional touches of the kali purum. Mr. Tod observes that he has often witnessed erysipelatous inflammation of the auricle and appendix, and has found it a difficult disease to treat, as well as a common one. His plan appears to consist in attention to the bowels and digestive organs, and an open blister to the nape of the neck. He has frequently found it necessary to continue all the remedies, especially the blister, for twelve and eighteen months after every symptom had apparently ceased. We suspect that many patients would rebel against such discipline. The following is deserving of extraction.

> "Mr. B., ætat. 30, of a delicate constitution, consulted me on account of being troubled with various kinds of noises in his ears. These he told me were always more severe during the night when in bed, than during the day, and never ceased for more than five minutes at a time. He informed me further, that when the noises ceased, they did so suddenly, and returned in like manner; that when he swallowed his saliva or yawned, he either stopped the noise in one or both ears for a few minutes, or changed its character; and that the sounds were often so loud, that he could not hear when a cart or carriage was driving past him. On examining the Meatus of each Ear, there did not appear the least secretion of wax,—but nothing else of a disordered nature could be discovered.
>
> Considering the phenomena which he complained of to be owing to this want of cerumen, and to some faulty function of the secreting vessels of the Labyrinth and Tympanum, producing a sympathetic constriction of the Eustachian Tubes, I directed him to take five grains of blue pill, combined with a quarter of a grain of opium, three times a day, until his gums became affected; to keep the Meatus of each Ear continually plugged with lint moistened in linimentum camphoræ cum liq. volat. c. e., and to apply a perpetual blister to the nape of the neck.
>
> In the course of a week he appeared a little, but not to any great extent, better.

He complained of the pills producing great pain in his bowels, and of his mouth being a little sore. I ordered the pills to be discontinued; and as his mouth did not appear to be much affected, directed him, instead, to rub in two drachms of the unguent. hydr. fort. every night. I also punctured the drum of each Ear, and recommended the other remedies to be continued.

In the course of another week his mouth became affected, but the noises in the Ears still annoyed him much, although greatly diminished.—I discontinued the ointment, and prescribed a little aperient medicine, combined with infus. rosæ, and sulph. quininæ, three times a day.

In the course of ten days his mouth got nearly well, his general health became much improved, and the noises in the Ears had almost entirely ceased. Ordered him to continue the quinine, to omit the aperient, and to take five grains of blue pill every night for a week, then every other night for a month. At the expiration of this period his general health seemed to have undergone a complete revolution, and his hearing became quite restored." 122.

In another similar case, a similar plan of treatment ultimately failed. We have only room for one more passage; it exhibits Mr. Tod's mode of introducing a bougie into the Eustachian Tube.

" After selecting a bougie of the calibre and shape of the tube, and oiling its extremity, I ascertain by external measurement the distance from the orifice of the nose to the Cavitas Tympani, and then mark the instrument so as to know when I have succeeded in reaching the posterior extremity of the canal: I then bend the point a little, and pass it along the floor of the nose, with the point touching its outer and under surface, to the part at which the membrane of the nose is about to ascend to form the external wall of the cavity, until I have reached the fauces: I then gradually raise the point of the bougie, so as to touch the lateral surface of the faucial cavity as I push it backwards, turning it in its course first a little to one side and then to the other; and when I find that it becomes loosely fixed, and does not descend towards the pharynx, I conclude that it has entered the Eustachian Tube: I then continue pressing the bougie gently onwards until I perceive the mark which I had made has reached the orifice of the nose; and after allowing it to remain a few minutes, withdraw it in as gentle a manner as it was introduced. When, however, I find that the point of the instrument does not get into the faucial extremity of the Tube, I make it a rule to lay it aside for two or three weeks, and to employ a silver probe instead. But sometimes the passing of the latter instrument will be attended with as much difficulty as the former; and when this is the case, the same rule should be observed regarding its repetition: for the principles upon which these instruments should be employed are the same as those which ought to guide us in the treatment of susceptible surfaces generally. After subduing the action which has been excited in the diseased part by the means recommended, the instruments should again, but not till then, be employed. The first application of the bougie will in general be accompanied with some pain; but as this sensation does not arise from the presence of any additional morbid cause, it will in a short time subside, and the patient will feel considerable relief. We must not, however, repeat the stimulus too frequently, for by passing these instruments too often, as much harm as good may be done. In treating obstructions of the Eustachian Tubes, we should be guided by the same principles which serve us in the cure of other diseases. When we repeat a stimulus too frequently, we bring on considerable irritation,—and we ought to recollect that irritation was the original cause of the disease. No instrument should be introduced for some weeks after the patient has applied for relief; for this will always be attempted too soon, unless we have succeeded in soothing the irritation by exciting secretion: even after we have begun the use of instruments, once or twice a week should be the extent of our visitations. By introducing the instruments oftener, 'we have,' to use the words of the late Mr. Abernethy, 'not only to counteract the irritation which previously existed, but the irritation which we have ourselves produced.' And it is from a want of attention to this circumstance, that the operation which we have been discussing has so repeatedly proved unsuccessful." 131.

We repeat that this little work evinces zeal, industry, and perseverance on the part of Mr. Tod.

Periscope;

OR,

CIRCUMSPECTIVE REVIEW.

"Ore trahit quodcunque potest, atque addit acervo."

Various Selections from the French Journals.

I.

REMARKS ON THE FETID ABSCESSES, WHICH FREQUENTLY FORM IN THE NEIGHBOURHOOD OF MUCOUS MEMBRANES.

MANY of the laws, which were supposed formerly to regulate and to be peculiar to the actions of living bodies, have been of late years disputed; and physiology has called in the aid of physical science to explain a number of pathological phenomena. The course of the fluid in the different tissues has been found, in many respects, to obey the ordinary rules of chemical and mechanical agency, as it will be illustrated by the transmission both of liquids and of gases, through the medium of imbibition, from one structure to another, without the intervention of the circulatory or absorbent systems. The formation of many abscesses is intimately connected, according to M. Velpeau, with such a process. His attention was first excited, by observing that many collections of matter, situated in the cellular or muscular structures, and apparently the result of active phlegmonous inflammation, are filled with an offensive and fetid pus, although there is no communication between them and any carious bones, or internal viscera. Such abscesses are observed around the mouth, at the sides or in front of the larynx or trachea, at the margin of the anus, and still more often in the abdominal parietes; in short, along the track of all organs which are covered with a mucous coat, and whose walls are more or less soft and more or less extensible. Every surgeon must have remarked the stench of many collections of matter formed in the gums, or round the mouth and anus. A few examples, however, will confirm the truth of this statement.

Case 1. A man had a large diffused swelling on the side of the face; it pointed between the cheek and arch of the upper jaw, and had existed only for six days. On opening it with a lancet, about half a wine-glassful of blackish-yellow pus, excessively putrid, escaped. One of the teeth was slightly carious; the abscess was quite healed in the course of five days.

Case 2. A woman, aged 50, had an immense abscess, which occupied all the side of the left cheek and jaw; it broke, and so abominable was the stench of the matter, that few could approach her. The matter continued to flow, and shreds of dead, cellular substance were extracted; in a month she was well.

In this case there was no caries of the teeth, nor any disease of the maxillæ, and although there was no communication with the cavity of the mouth, the fetid smell was perceived immediately after it burst, and became less and less offensive when the abscess was thereby exposed to the external air.

Case 3. A man, aged 30, had a fluctuating swelling in front, and extending a little to the left side of the larynx. On opening it, the surgeon's attention was struck by the extreme fetor of the contents, and inferred that the os hyoides or laryngeal cartilages were diseased; or else that some communication existed between the abscess and the gastro-pulmonary passages. A careful examination, however, proved quite convincingly that it was a simple, uncomplicated collection of matter, reaching from the parotid gland to the middle of the neck, and was neither connected with any caries or ulceration of the hard parts, nor had any opening into the larynx or œsophagus. The patient died of another disease, and the accuracy of the above account was confirmed by dissection.

Case 4. A man, aged 35 years, had suffered much from pain, &c. around the anus for 10 days before he applied for advice. An abscess existed close to the sphincter: it was freely opened, and much blackish, stinking pus, mixed with lumps of putrefied substance, and smelling strongly of fæces, was evacuated. The probe did not enter the gut, and the surgeon concluded that the abscess, in spite of its fetid contents, was simply phlegmonous, and might heal without any operation. The patient was discharged, cured, in 15 days.

Case 5. A woman, aged 57, thin, but healthy, was suddenly seized with severe colic in the middle of December, 1831. Two days after, a swelling appeared in the lower and right side of the abdomen; it was painful on pressure, gradually became more circumscribed, and soon attained the size of two fists. It burst in January, and discharged a large quantity of blackish-grey, grumous pus, smelling very strongly of the intestinal contents; some gas also escaped, and a few pellets of dead cellular substance. A careful examination with the probe could detect no communication with the cavity of the peritoneum, or any part of the gut; and the speedy cure made it certain that the matter had been formed in the muscular parietes.

Le Dran has recorded the following case.

Case 6. A man, aged 24, was, by his own account, seized with symptoms of enteritis. A tumor appeared in the right groin, and extended to the umbilicus; it was opened by a bistoury, and discharged much fetid pus. Le Dran thought that this abscess had its seat between the omentum and the muscular pariëtes; but the successful result sufficiently proves that it was not connected with the abdominal cavity.

Case 7. A young woman had a phlegmonous swelling in the hypogastric region. On puncturing it, a milky fluid and an offensive pus were evacuated. The patient died, and the abscess was an enormous sac, situated between the peritoneum and the muscles.

Observations on the preceding Cases.—Abscesses in the soft, spongy textures of the gums are very common; the fœtor of the pus has usually been attributed to the co-existence of disease of the teeth, or of the maxillary bones; but this explanation is not satisfactory in all cases, for such disease often does not exist. M. Velpeau rather ascribes it to air having entered by imbibition, and the matter becoming thereby vitiated from the resulting chemical changes; for in what other manner should abscesses, whose symptoms, progress, and maturation, differ in no respect from ordinary phlegmonous inflammations, be filled with a highly offensive pus, before the possible introduction of air from without or within through any opening, and which are not accompanied with any diseased bones. It is very interesting to remark that these abscesses are observed in such regions as are lying close to mucous canals, and separated from these only by very thin walls. In the neck we find them between the fascia cervicalis and the thyro-hyoid membrane, or the pharynx, the œsophagus, or the trachea; under the jaw, between the supra-hyoid aponeurosis, and the inferior wall of the cavity of the mouth; in the face, imbedded deep in the flesh of the cheeks—so that the air very probably permeates the texture of the mucous linings, and thus blends with the contents of the sac. The phenomena alluded to are still better observed, when abscesses form round the margin of the anus. Many surgeons deem the stercoraceous smell, emitted from such abscesses, as unequivocally denoting the existence of genuine fistulæ in ano. M.

Velpeau assures us that this idea is frequently quite erroneous, and reports a case in confirmation. A man had a very extensive abscess, situated close to the sphincter, and, when opened, every one supposed, from the stench of the discharge, that it must have communicated with the gut. The suppuration, however, speedily dried up, and the sore was cicatrized in a few days. Many analogous cases are narrated. M. Velpeau has, after a careful examination of these, come to the conclusion that a large proportion of true fistulæ ani are originally mere abscesses on the outside of the gut, and that the fistulous aperture into the bowel is a subsequent occurrence. Fortunately, purulent matter has always a tendency to the exterior of the body; else the thin walls of the gut would, in every case, be inevitably diseased.

When a fetid abscess forms in the abdominal parietes, M. Velpeau thinks that they are developed originally in, or at least take their start from, the fascia propria, or cellular tissue which unites the peritoneum to the abdominal muscles. The purulent matter being thus deeply lodged, is supposed to receive, by transudation from the bowels, an admixture of gas or of liquids, or perhaps only of odorous effluvia. What induces M. Velpeau to believe that such a transudation does really take place, is, that he has observed that the smell of the pus varies with the situation in the abdominal parietes where the abscess is formed. Thus, in one case where an abscess existed in the right groin, a strong and distinct stercoraceous odour was emitted from the pus; whereas in another, where the abscess was situated in the epigastric region, the smell was sourish, and not unlike that of imperfectly digested food. Besides, the colour of the discharge is found to vary much in different instances, and may be often observed to be somewhat indicative of the substances which may be contained in the bowel, lying next to the posterior wall of the abscess.

The fetid abscesses of the abdominal parietes are of tedious formation, and are preceded by dull, deep-seated pain, by a tumefaction more diffuse than circumscribed, and by symptoms of general feverish irritation. When the skin becomes prominent, still the fluctuation is often very indistinct; because, in consequence of the thickness and toughness of the integuments, the matter burrows deep, separating the peritoneum from the muscular layers. Sometimes, though very rarely, the contents are discharged into the cavity of the abdomen. Le Dran reports such a case. The rarity of the occurrence is to be attributed to the tendency of suppuration towards the surface, and also to the uniform and equable pressure made by the contained viscera upon the posterior wall of the cyst. The agency of this second cause has hitherto been overlooked; but probably it is the more efficacious of the two. In all abscesses, formed in the abdominal parietes, it is necessary to make a free and large incision. M. Velpeau says that the more extensive the opening, the less danger there is from any re-action of the atmosphere, either on the walls of the cavity or on its contents; and also from the occurrence of the fever of "absorption," and of those symptoms of prostration which are not unfrequent in such cases. As to the dressing of the sore, it is to be conducted in the usual manner.*—*Journal Univers. et Hebdom.*

II.

CASE OF APHONIA, TREATED BY NITRAS ARGENTI.

A YOUNG woman had gradually lost her voice, from repeated attacks of catarrh; her general health was quite good. During deglutition, she experienced an uneasiness in the larynx. When she did not make any very strong effort to speak out, her voice resembled a low whisper; but if animated, and anxious to exert her speech, a noise, like a succession of shrill whistles, or of the mewings of a kitten, was produced. M. Trousseau treated the case by the local application of a strong solution of lunar caustic, introduced by means of a sponge affixed to a bougie, and gently pressed over the opening of the larynx. The operation was followed by retchings, vomiting, and a cough which nothing could allay. These distressing symptoms abated in about a quarter of an hour, and then the patient assured M. T. that she felt little pain when the caustic was applied; and she expressed her astonishment that already her voice was much stronger, and that she could speak louder than she had been able to do for eight months. She was ordered to gargle her mouth and throat with a solution of alum. The retching and vomiting recurred at intervals till the following day, and the pain of the operation continued for a day or two longer. The patient was, however, able to drink, and to swallow soup, &c. What is strange is, that although, almost immediately after the application of the caustic, the voice was so much improved, at the end of 10 days the aphonia was as bad as ever. The remedy was re-applied, but in a still stronger form. A sponge, dipped in a saturated solution of the caustic, was introduced as far as the opening of the larynx, and about 10 drops allowed to distil into it. Immediately a violent convulsive cough arose, by which most of it was expelled in the Doctor's face! The pharynx, tongue, and lining membrane of the cheeks were rendered as white as milk. Vomiting and a severe cough came on; fortunately there was but little pain, no fever or constitutional disturbance. Her voice did not receive the speedy amendment, as after the first operation. The cough was very troublesome for 12 days; but the voice appeared to have obtained strength, although it was very hoarse. After the 13th day, she was able to speak for some minutes in succession, and the aphonia never afterwards returned. The voice, at first hoarse and occasionally squeaking, became more and more clear; however, after a long walk, or exposure to cold, or too much talking, the hoarseness still returns, but not the aphonia.—*Journ. Univers. et Hebdom.*

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* We are not to be understood as implicitly agreeing with M. Velpeau in these views.—*Ed.*

III.

CASES OF RHEUMATISM, TREATED BY THE LOCAL USE OF THE ACETATE OF MORPHIA.

A WOMAN, aged 28, had a smart attack of rheumatism in both knees, the shoulders, and wrists; the pains were constant, and the affected parts were considerably swollen and red. She was freely bled from the arm, without relief—blood sizey. A blister on each knee ordered, and the raw surfaces to be dressed with half a grain of acetate of morphia; for the three subsequent days she was quite free of all pain—the quantity of the morphia increased to three quarters of a grain. In two days more she had completely recovered.

Case 2. A man, aged 27, was seized with violent pains in both knees on the 15th March. On the 22d, the joints were blistered, and the morphia applied in the dose of a quarter of a grain. In two days the pains were much relieved. On the 28th, he was pronounced cured.

Case 3. A young man, aged 16, suffered unremitting pains in the knees, wrists, and elbow-joints, which were swollen, red, and very tender on pressure, and incapable of being moved. For three nights he could not sleep, from the severe suffering; pulse full, skin burning hot: he was bled and starved. Next day the pulse was more favourable, but the pains rather worse: a blister to be applied to each knee, and the surfaces to be dressed with a quarter of a grain of the acetate of morphia. This treatment was continued for four days, when the patient made no complaints but from the blistered surfaces.—*Journal Hebdom.*

IV.

CASE OF SEVERE SCIATICA, CURED BY BLOODLETTING.

A. R. aged 39, had suffered for a month from excruciating pains in the upper and back part of the right thigh; they shot down on the outer side of the limb to the ankle and foot, and generally ceased with a distressing shaking or trembling of the extremity. These paroxysms returned almost every hour, and were so agonizing as to force the patient to scream out. While they lasted, the whole limb appeared to be affected with a tetanic spasm, the gastrocnemii muscles being drawn into hard knotty swellings. During the intermissions, there was a constant, slightly-hot pain along the course of the sciatic nerve. He was largely bled from the arm, and 30 leeches ordered over the sciatic notch, to be followed by opiate poultices. On the following day, the number of paroxysms was reduced by one-half, and the character of the pain changed from cramp and the feeling of burning, which shot like a rocket from the hip to the toes, to that of cold water gliding rapidly under the skin in the same direction; leeches to be re-applied. In two days the pains had quite disappeared; and in order to confirm the cure, the patient was ordered to rub in 20 drops of croton oil on the outside of the thigh; a copious eruption of pustules was produced, and, in six days more, the patient was discharged cured.—*Journ. Hebdom.*

V.

Paralysis of the Portio Dura, cured by Moxas.

A. M. aged 43. The mouth was much drawn to the right side, and the right commissure pulled considerably upwards, while the left was directed downwards and inwards, leaving the front teeth exposed; the left cheek was much stretched, and closely applied to the alveolar arches; the left eyelids closed imperfectly, and thus part of the cornea was unprotected; the cause of this was chiefly attributable to the upper lid being drawn up by its levator muscle. Considerable conjunctivitis had ensued, but the vision did not seem affected. The food was always involuntarily carried to the right side of the mouth; the saliva and any drink trickled from the left angle of the mouth down his chin; the speech, at first, was not affected, but afterwards he could not pronounce certain words; the sensibility of the parts, and the functions of taste and smell, were perfect. The symptoms had existed for seven days, and no assignable cause could be stated. A moxa was applied over the condyle of the lower maxilla, and good effects were apparent, on the second day, in those parts which are supplied by the middle or transverse branch of the facial nerve; a second moxa was, therefore, ordered over the angle of the jaw, and speedily the speech became more distinct, the deformity of the mouth less, the food was more easily and steadily retained between the teeth in mastication, and liquids could be better retained. When the patient attempted to pronounce the letter "O," the hiatus of the mouth was decidedly less on the affected side than hitherto; still the motions of the left eyelids were very imperfect, and, therefore, two days after the last moxa, a third was ordered over the course of the ascending twig of the nerve. The effects were most gratifying; for on the same evening, the patient could close the lids quite accurately, the ophthalmia disappeared, and in 17 days the patient was discharged well.

Reflections. This case shews satisfactorily that such affections of the facial nerve are frequently local, and not at all connected with cerebral disease. The occurrence of the paralysis successively in the different branches of the nerve, and the effects of the treatment, first on one of these branches, and then on the other two, are very interesting, and confirm the opinion just stated. The propulsion of the food between the teeth and cheek of the right, or healthy side, causing it to be distended, and requiring the finger to bring the mouthful between the teeth, is rather contradictory to what is usually observed.—*Journ. Univers. et Hebdom.*

VI.

EPILEPSY CONNECTED WITH SCROFULOUS DISEASE OF THE CEREBELLUM.

R. S. aged 36, was carried to the Hôtel Dieu on the 7th October, 1831, while under an epileptic fit—he had been subject to such attacks for a long time, and they returned usually every month. When he coughed, a sharp pain was felt at the back part of the head. There was a swelling at the lower part of the dorsal region, caused by the projection of the lowest dorsal and upper lumbar vertebræ; this had existed for six or seven years. This patient had a great reluctance or an inability to stand for any length of time, or move forward; yet he could walk if he chose to compel himself. He died very suddenly, and the dissection revealed the following appearances. The swelling on the back arose from the bunching out of the spinous processes of the vertebræ; the bodies of which were softened and wasted—the dura mater of the medulla at the part was diseased, and the canal filled with purulent matter. In the upper lobe of the left lung, was found a tuberculous mass, passing into a chalky state; and quite at the summit of this lobe there was an empty pouch or cavity, lined by an apparently serous membrane.

The substance of the cerebrum was much firmer than usual, as if it had been steeped in an astringent fluid. The lateral ventricles were enormously distended by a lemon-coloured serum, amounting to 4 or 5 oz. in quantity. The cerebellum was also much firmer in consistence, and on dividing it vertically a tuberculous mass in the state of infiltration into the medullary tissue and about an inch in extent, was found to rest on the posterior wall of the 4th ventricle, which had thus been considerably contracted in size.

Reflections. It is well known that many physiologists have placed the seat of physical love in the median, or central part of the cerebellum; now this was exactly the part which was found diseased in the present case; and yet the man retained all sexual desires; which were neither encreased, impaired, or perverted.

The opinion of M. Magendie that the median lobe of the cerebellum is, as it were, the regulator of the voluntary movements of the body may be supposed to be neither confirmed, nor confuted by the particulars observed in this patient, in consequence of the co-existence of spinal disease.

An interesting case however of tubercular disease in the median part of the cerebellum, without any complication, is detailed in the Bulletin de la Société Anatomique. A soldier aged 20 suffered from excruciating head-aches, general weakness, tottering of the limbs, and great reluctance to be moved; he voided his urine and fæces in bed; but whether this proceeded from a paralysis of the sphincters, or from sheer unwillingness to be disturbed in bed, could not be ascertained—appetite considerable—mental faculties impaired. On dissection, the lateral ventricles were found distended with water; and on the upper part of the cerebellum close to its median line, a tubercular deposit of a yellowish colour, about three inches in circumference was observed. The substance of the cerebellum was in a state of ramollissement for the space of two lines round the tumour, with which however it was not incorporated. This case therefore corroborates the opinion that cerebellar disease generally causes a great diminution in the muscular powers of the lower extremities.

Another reflection arising from the study of the case which we have related is; in what manner are we to explain the periodicity of the epileptic seizures? they occurred in the present instance usually once every month. Are we to regard the tuberculous disease of the cerebellum as the "fons mali"? Our answer will probably be in the negative, and the reason we assign is, that the morbid structure could not be changed in its form or extent, at stated intervals. Perhaps, therefore, we should take into our consideration the action of the cephalo-spinal fluid, to which Magendie has drawn the attention of medical men. The lateral ventricles being much distended with water; and the diseased mass compressing the fourth ventricle, and consequently obstructing the opening of communication, discovered by M. Magendie, between the fourth ventricle, and the sub-arachnoid cellular tissue of the medulla, all the effused fluid was necessarily collected in the cerebral ventricles, and to such an extent at certain intervals, as to overcome the pathological reaction of the brain, and thus to induce the irregular movements of epileptic convulsions.—*Journ. Hebdom.*

Remarks. The language of this last sentence is not very easily understood.—Ed.

VII.

Epidemic Disease among Poultry.

While the cholera is raging in Paris, at Choisy-le-Roi, which has been spared from this scourge, a very fatal epizootic plague has appeared. This coincidence has not unfrequently been noticed in other epidemic diseases; sometimes horses, cows, sheep, &c. have been the victims; but more rarely has any description of bird suffered. The cholera had scarcely broke out in Paris, before a dreadful mortality among the poultry of the country round, was announced. At first this was attributed to poisoning; but soon this idea was abandoned; and the cholera itself was denounced as the destroyer; and now every one affirmed that the hens were vomited and purged, were cramped in their wings and legs, and became quite blue before death!! Be this as it may, it is very certain that the germ of cholera did not remain in the corpse, as many of the fowls, which had been victims, were eaten, without causing any bad effects!! The disease broke out on the 3rd of April; no cause could be assigned for its appearance; and it was decidedly not contagious. Ducks and geese escaped, though feeding in the same yard, and only three turkeys went to Orcus! The mode of seizure was as follows. The bird appeared to be feeble and unable to move, resting squat upon its tail; the crop was found distended with food—the breathing became short and hurried; the pulsations of the heart much quickened; diarrhœa of whitish liquid matter supervened; the throat and beak were choked up with a glairy mucus; the comb at first was of a livid hue, and became more and more purplish as death approached—convulsions frequently preceded the death. Almost every bird that was seized of the disease died. The intestines, when examined, appeared to be inflamed at various points; the liver was gorged with blood, and the gall-bladder distended with very thick green bile.—*Journ. Hebdom.*

VIII.

Diabetes Mellitus.

A soldier had suffered dreadfully for five months from a thirst which he could not quench; from great dryness and heat of the surface, &c. The quantity of urine per diem exceeded fifteen litres. He was put on a diet of strong animal food; rubbed embrocations on the skin, used sulphureous baths, and had moxas, and cupping glasses occasionally applied over the kidneys. The quantity of urine was reduced to six litres in three weeks; and he found himself so much better that he refused to remain longer in the hospital. On analyzing the urine, much saccharine matter was readily detected, in the proportion of an ounce and a half of a thick honey-like fluid, in every litre of urine. Neither urea, nor uric acid could be discovered; and the sulphates and phosphates were much diminished in quantity.—*Annales de la Medécine Physiol.*

IX.

Scrofulous Disease of the Bones.

Case 1. A young girl had long laboured under scrofulous disease of the shoulder joint; it was much swelled, and covered with numerous ash-coloured ulcers, from which flowed a profuse discharge—there were several fistulæ running towards the head of the humerus; but the bone could not be detected bare, by the probe. The joint was anchylosed; and the limb quite wasted—diarrhœa and hectic fever had brought the patient to death's door. The constitutional symptoms were first corrected; and then the use of iodine commenced, externally in the form of baths thrice a week; and the shoulder was daily rubbed with an ointment of ioduret of lead. As the patient bore the use of the iodine well, its inward use was now employed, and two ounces of the mineral iodated water given, the dose being gradually encreased to 8 and 12 ounces. The fistulæ were injected with a solution of iodine. The beneficial effects were speedily obvious; the joint was much reduced in volume, and the suppuration diminished in quantity. After the iodine had been taken for nearly two months, its use was suspended for three weeks, and diluents and aperients administered, with the view of counteracting any pernicious effects which the drug might have on the stomach, or on the general health; but again resumed and continued for six to eight weeks. In this way the medicine may be exhibited for a great length of time without any danger, especially if the preparation given is the solution of the hydriodate of ioduretted potass (a grain and a half of iodine, and three grains of hydriodate of potass in the course of the day.)

This patient obtained the cure of all the sores, and the state of the joint, though necessarily remaining anchylosed, was vastly improved.

Case 2. A child aged seven presented the left shoulder much puffed and enlarged; numerous fistulæ opened over the head of the bone, which was certainly much enlarged in size; the limb was quite atrophied—the motions of the joint were almost entirely lost—he had cough, diarrhœa, and evening fever. Mild nourishing food was ordered; the mineral iodated water given inwardly, and the shoulder rubbed with the ointment of ioduret of lead. In a fortnight the child was much improved; and to the above treatment was now conjoined frequent bathing in a river. The fistulæ were injected with a lixivial wash. At the end of three months, the movements of the joint had become much more free; the shoulder was very little swelled, and the limb had acquired flesh and strength. The iodine had been omitted at two periods, during which diluents and an occasional aperient were administered. The good effects were well marked in this case; the disease had not existed sufficiently long to expect a spontaneous cure; many anti-scrophulous remedies had been previously tried, and had all failed; but the iodine treatment had not been continued above a week or two, till the little patient shewed signs of improvement. These two cases are illustrative of strumous enlargement of the osseous texture. We shall now say a few words on the subject of caries. This morbid state most commonly attacks the small bones, as the phalanges of the toes and fingers, the metacarpal and metatarsal bones, and those of the tarsus and carpus. It is not rare in the vertebræ, or even in the sternum, ribs, and other long bones. Sometimes, but not always, it is preceded by swelling of the periosteum, or of the bony structure itself. A dull deep-seated pain, without any appreciable cause, or it may be, supervening after a lapse of time to a contusion, is the earliest symptom; to this is soon added a general tumefaction, and agglutination of the surrounding soft parts. An abscess at length is formed and discharges a thin greyish matter mixed with albuminous flocculi, and sometimes with portions of bone. The probe will often detect the roughness of the exposed bone; and in a few cases will penetrate into the cavity of a joint; the existence of such a fistula may be also inferred from the admixture of synovial fluid with the discharge. M. Baudelocque, the author of this memoir, states that he has exhibited iodine in upwards of 30 cases of scrophulous caries of the bones; but seldom with any decided success, amounting to a cure. Its action howevever was very obviously as beneficial to a certain extent in these, as in any other examples of strumous disease; but since morbid changes in bones are more slowly formed, and more slowly advance, than in softer textures, so the cure must necessarily be more tedious and protracted. A period of six months, and upwards, will be generally found necessary; and it is seldom that we can have patients, especially in public institutions of charity, submitted to treatment for such a length of time. The following four cases will illustrate the principles recommended.

Case 1. M. L. aged 9, was presented at the hospital on the 1st April, 1831. In addition to scrophulous disease of the eyes and lids, there were numerous fistulous openings in the skin over the sternum, which was found bare and rough by the probe. Two other fistulæ existed on the outer side of the mamma, just below the anterior fold of the axilla; and the rib at this part was also carious; a fluid injected through these last-named openings escaped by those situated over the sternum. The child laboured under the effects of mercurialism; profuse diarrhœa and hacking cough. The constitutional irritation having been first subdued, recourse was had to iodine. In the beginning of June the iodated water was given in the dose at first of two ounces, and gradually encreased to 10 ounces in the course of of the day—three iodated baths were ordered every week. This treatment was continued for five weeks, and then suspended for a fortnight or more. In addition to the former treatment, the fistulæ were now injected with a concentrated solution of iodine. By this time the ophthalmic disease was quite cured; and the discharge from the abscesses much diminished and improved. In a few months, the caries of the sternum and ribs was conquered, the fistulæ healed, and the patient discharged well.

Case 2. S. D. aged seven years, was very similarly affected to the last patient; obstinate disease of the eyes and lids, and caries of the two first phalanges of the left fore-finger, and of the fifth metatarsal bone of the same side. The iodine was administered in the form of drink, baths, and injections, and the cure was ultimately complete.

Case 3. T. S. aged 12. The left elbow-joint much swelled; the skin over it of a violet-red colour, and disfigured by numerous scars, and fistulous apertures, from which there flowed a profuse discharge. The bones found bare on the introduction of a probe. The fore-arm bent on the arm at a right angle, and could not be either bent, or extended—no motion between the radius and ulna. The general health was well attended to, and iodine administered both externally and internally. In four months all the fistulæ were cicatrised, and the motions of the joint much more considerable.

Case 4. M. L. aged 8. Almost complete anchylosis of the right elbow-joint, which is much swollen and puffed; there are five scrofulous ulcers, two of which penetrate to the humerus and ulna, which are found bare and rough. General health good, with the exception of an obstinate diarrhœa. At first sulphureous baths were employed; also local alkaline baths to the joint, and alcalis were given inwardly; but no success ensuing, cinchona was ordered, and an iodated bath thrice a week:—the ulcers to be dressed with an ointment containing ioduret of lead. In the course of a month, the mineral iodated water was given internally in the dose of from 4 to 6 ounces. With an occasional intermission this plan of treatment was continued for about three months, by which time the ulcers had healed; the swelling disappeared, and the anchylosis much diminished. We cannot fail to attribute the rapidity of the cure to the means employed; no spontaneous cure is ever effected so speedily; the patient had been in the hospital nearly 12 months, before the iodine was employed; and in that period very little progress had been made; whereas in three months afterwards the disease was subdued.—*Revue Médicale.*

X.

PUERPERAL PERITONITIS, FOLLOWED BY ASCITES AND SPONTANEOUS PERFORATION OF THE ABDOMINAL PARIETES.

F. G. æt. 30, was delivered April, 1830, of her 7th child. On the second day after her confinement, she was much agitated; and the consequence was, that severe pains in the abdomen came on, the lochia were suppressed, and the mammæ became flaccid. The symptoms were alternately relieved and aggravated for eight days; and at this period Dr. Puntons was called in. He found the patient much dispirited and alarmed; belly distended, sonorous, and painful on pressure; distinct fluctuation; suppressed lochia; urine much diminished in quantity, obstinate constipation, severe headach, tongue clean, much thirst, pulse irregular, somewhat hard and very frequent; œdema of the feet and ankles.

Treatment. Emollient fomentations, mercurial frictions on the inside of the thighs, calomel and nitre inwardly. Diet, chicken broth. This plan of treatment was persevered in for a week; the abdominal tenderness had much abated; but the distension had become greater; pulse less hard—a blister ordered to be applied to each thigh. On the 18th day from the commencement of the attack, an opening or slit occurred in the abdominal parietes, about an inch below the umbilicus; the part had been smooth and glistening for a few days before. About a pint of yellowish, inodorous fluid escaped. Two days afterwards a similar vent took place in the upper part of the left hypogastric region, and an ounce or two of a citron coloured serum flowed out. Simple dressings applied to the wounds, and firm compresses to the abdomen, in order to promote the expulsion of the fluid. The woman gradually recovered.

Observations. An analogous case is mentioned by Frank. The effused fluid was visible through the navel. The author of the Nosographie Philosophique narrates an example of puerperal peritonitis, in which a large abscess formed in the left labium; on the 14th day, it broke, and the patient was speedily cured. Van Swieten and Chomel allude to many cases in which the abscesses had found their way into the intestines and caused a purulent diarrhœa.—*Revue Médicale.*

XI.

ON SOME OBSCURE FORMS OF THE PHLEGMASIÆ.

AN inflammation, when its symptoms are uncomplicated and unobscured may be always very easily detected, and very certainly cured; cases however frequently occur, in which the characters of the disease are modified, and curtailed of their accustomed distinctness; and in the management of which unusual attention is demanded of the physician, as the attack is generally insidious, and the progress irregular and ill defined. The danger of such cases is ten fold greater than of others, in which the symptoms may be much more violent and formidable; as the activity of the remedies may be easily proportioned to the severity of the malady.

Case 1. A man, aged 55, had long been afflicted with strictures of the urethra. On the 4th February, 1831, he was admitted into the hospital. A constant muco-purulent discharge from the canal—bougies were employed, and the strictures dilated—still the discharge remained. The Venice turpentine was given inwardly, and produced very beneficial effects on this vesical catarrh. On the 24th of April he complained of heat in his throat, slight difficulty of swallowing and other characters of angina. The symptoms became alarming—great dyspnœa; pain in the larynx, and perfect inability to swallow. By very active depletion the inflammation was subdued; but a relapse most unexpectedly took place, in the course of two or three days; and so rapid was the onset, that on the evening of the attack, his life was despaired of, the respiration being performed with extreme difficulty and accompanied with a slight tracheal râle; the sputa viscid and purulent, and expectorated with great distress; no pleuritic pain. Nevertheless auscultation and the ensemble of the symptoms proclaimed the existence of a serious pneumonia. Patient bled from both arms; and 60 leeches to be applied to the side—died an hour after (!!) Several hours before his decease, the patient had experienced rheumatic pains in the right knee, which was tender on pressure.

Dissection. Slight traces of inflammation in the pharynx and larynx. The left pleuræ adhere by cellular bands. The lung is congested as in asphyxia. The right pleuræ present some recent albuminous patches, and, in their cavity, a purulent effusion to the amount of seven or eight ounces. The lung, towards its base, crepitates; but, in other parts, is gorged, and in a state of congestion.

Reflections. It is interesting to trace the events of the above case in their sequency. First a vesical catarrh—this is stopped; then symptoms of general fever supervene—angina and laryngitis ensue, and these give way to a fatal inflammation of the chest. What occasioned this succession of phlegmasiæ, in a constitution by no means plethoric? We can only answer, some inexplicable disorder of the constitution; but in what consisting, or on what depending, we cannot tell. This obscure and indistinct form of pulmonic inflammation is not very uncommon after severe wounds or injuries, when complicated with extensive suppuration. The attack is so insidious, that it has often made alarming progress before the existence of the disease is suspected. It is generally fatal in its issue; and the morbid appearances found on dissection differ considerably from the pathology of ordinary pneumonia and pleuritis. We do not recognize the different structural changes successively developed in, and denoting the progress of, the different stages of the disease; but, instead of this regularity, we find all these changes occupying confusedly, here and there, a lobe of the lungs, which thus acquire a sort of mosaic appearance, from the apposition of party-coloured spots or patches.

Case 2. A coachman, by a fall, received a severe contused wound of the leg. After suppuration had been established for some time, the discharge ceased for two days. The patient felt himself indisposed, but had no cough, nor expectoration, nor pain; nothing, in short, to lead any one to suspect serious pulmonary disease. In a day or so, copious sputa announced the presence of pneumonia in its third stage; but, in spite of the remedies used, the patient died, and dissection displayed one of the lungs in the morbid state described above, throughout its entire extent. There was also an abscess in the liver.

Case 3. A. L. aged 37, pale and emaciated; can lie only upon her back; pulse small, contracted, and frequent; constant cough, with expectoration of sputa, such as are observed during the resolution of an attack of pneumonia; diarrhœa, and distressing sleeplessness. The symptoms, after a time, became suddenly much aggravated, and threatened immediate dissolution: the respiration was panting and frequent—pulse rapid and full—skin hot—expectoration more abundant, and streaked with blood—diarrhœa increased; death soon followed. The patient had been ill of an obscure pectoral complaint, for upwards of a month before the history of the case begins.

Dissection. A large effusion of a purulent serum in the left cavity of the pleura. The lung of this side was much wasted, and adhered to the pleura costalis by strong false membranes. The superior lobe of the right lung exhibited numerous tubercles; the middle one was hepatized in different parts, and the remaining portion, although crepitating when compressed, was infiltrated with a frothy reddish serum. A well-formed pus oozed from some of the veins of the lungs, especially in the hepatized patches; and in other parts, the veins were found choked up with coagulable lymph. It is an interesting subject for reflection, whether the inflammation of the veins, which had given rise to the deposition of pus and fibrine in their canals, was caused primarily by the absorption of the purulent effusion in the pleuræ; if so, the present case is approximated, in a most important feature, to those already narrated in illustration of the form of pneumonic inflammation supervening during the process of suppuration.

XII.

FEEBLE AND INJUDICIOUS TREATMENT OF TYPHUS FEVER, BY THE FRENCH PHYSICIANS.

IT is very generally admitted that the French are most excellent pathologists and physiologists, but inert and unsuccessful practitioners, especially in medical cases. We do not pass this censure from the details of a single case, as this would be unjust and uncandid, but from a review of their general practice. The following example will illustrate the truth of our remark.

B. C. aged 17, was seized suddenly and severely with headach and febrile irritation, on the 24th December, 1831. She felt as if beaten all over, had no appetite, but much thirst, general restlessness, and tendency to delirium. The symptoms between the above date and the 11th of January, 1832, are not narrated; at this latter period, her face had a pale and earthy aspect—she lay constantly on her back—did not answer any questions put to her—skin warm and dry—pulse small, but not frequent—respiration short—tongue red at the edges, and covered with a grey coating in the middle—teeth covered with a dark slime—urine scanty and high-coloured—pain in the right ilium when firmly pressed upon.

Treatment. Low diet and sulphuric lemonade!!!

On the following day, it was found that the patient had passed a restless night, being frequently in a high state of delirium; the face twisted to the left side, which made the Doctor suspect hemiplegia; but he found (simple man!) that the grin disappeared if he turned his patient a little round in bed. When her arm was pinched, she withdrew it, and grumbled some inarticulate sounds of suffering. This last circumstance (we are told!) led to the important discovery that, when questions were addressed to her, they were unanswered, though she appeared to understand them, especially if bawled sufficiently loudly, and if the brain, at the same time, was worked up to a sufficient pitch by pinching her arm!! The stupor had increased, the pupils were dilated, the head warm, skin dry, pulse soft and small, pain in the iliac region worse, urine and fæces passed involuntarily.

Treatment. The sulphuric lemonade, a blister to each thigh, and ice applied to the head!!

On the morrow she was considered somewhat better—tongue less dry—stupor not so great—the pulse had risen, and the skin was perspiring—pain of the side gone—occasional convulsive twitches of the muscles of the face.

Treatment. Limonad. sulphuric. lav. camphré.

Next day the report was, that she had been delirious all the previous night, and now there was great prostration of strength, insensibility, &c.

A blister to the nape of the neck, and ice to the head.

In the afternoon the breathing became so embarrassed as to threaten suffocation. She was bled from the jugular, and died immediately after!!

Dissection. No morbid appearance discernible in any of the abdominal viscera, beyond venous congestion of the liver and spleen. The lungs were, throughout almost their whole extent, lienised, or converted into a structure like that of the spleen; when cut into, much black blood flowed out. The venæ cavæ and pulmonary veins gorged with an inky, fluid blood. The veins of the brain were similarly congested.

Our readers will doubtless agree with us, in condemning the imbecile plan of treatment pursued in this case. The patient ought to have been bled at least locally; have taken mercury inwardly at first, and, towards the termination, wine and nourishment.—*Journal Hebdom.*

XIII.

ON THE USE OF LARGE FLAT LIGATURES IN CASES OF ANEURISM, &c.

IT appears that M. Roux, one of the most successful operators in Paris, adheres to the old practice of employing flat, tape-like ligatures, and usually interposes a roll of plaster between the vessel and ligature. In upwards of 40 cases under his care, secondary hæmorrhage occurred only in four of them; and of these four, it was permanently arrested in two by the application of another similar ligature. Greater success than this has not, we think, been obtained by surgeons who employ the small round ligatures.—*Journ. Heb.*

XIV.

Resistance of the Official Mandate to disclose the Names and Abodes of Patients, who had received Wounds in the late Disturbances in Paris, and who were under Treatment, by the Surgeons who attended them.

The following sensible letter was addressed to the Academy of Medicine by M. Desportes; we shall transfer it to our pages, as a record of the public spirit of our French brethren, and as a worthy pattern to be copied on similar occasions.

Gentlemen,—The Government has more than once consulted you on questions which concern the practice of medicine, and you have always displayed a readiness and zeal in explaining the relations between the laws which regulate the profession of the healing art, and the general spirit of our national legislation, and, consequently, the connexion, in certain points, which subsists between the legislation, and the customs and manners of the people; for surely all government, to be good and permanent, must be in accordance with the ideas, feelings, and interests of those whom it rules. It belongs to you, at present, to declare the painful regret you experience, on the subject of the edict lately issued by one of the magistrates of the Department of the Seine, an edict upon which I shall not comment, as it can be viewed only as the offspring of a strange error, which will no doubt be expunged whenever it is exposed by you. It is not my intention to examine whether this disgraceful mandate is conformable to the principles of the existing legislation, and to the decision pronounced in last session by the Chamber of Deputies, wherein it is enacted, that non-disclosure shall no longer be considered as an offence or crime; or whether, in point of justice, the ordinance of 1666 and that of 1806 can be put in force, when the article 378 of the penal code subsists, and is later in date than these; or, lastly, whether it is well calculated to obtain any great political advantages. What I shall chiefly insist upon, is the flagitious immorality of the action required of professional men, and that, too, under pain of a penalty. As all political discussion is, and ought to be, interdicted within your walls, so our every action and every word must strictly accord with the rules of a pure morality, if we hope to benefit either science or humanity, our fellow-citizens or our individual characters. Oh! shameful outrage to the medical profession, to call upon us to reveal secrets as sacredly binding as any confessed to the minister of religion. Now a priest, if he ever abuses the confidence reposed in him, is for ever branded with infamy; and where is the difference between the duties of a priest and those of a physician? both have a public, official, and moral character to sustain, and without which the most imposing and useful attributes of their profession are often nullified. Both the one and the other are considered as "exceptional professions," in the article 378 of the penal code. By this article, medical men are received in the same light with the parents, brothers, and sisters of their patients; and thus it not only relieves them from all obligation of disclosing, but denounces punishment if they lose sight of those sacred ties which bind them to all such as are entrusted to their professional care. I, therefore, propose that a commission should be appointed, to examine into all the questions which may spring from, and are connected with, the above very important topic; and to decide whether the respect due to public morality, and the fulfilment of our duties towards our fellow-citizens, are compatible with the edict which has demanded so unworthy a compliance.—*Journ. Hebdom.*

XV.

ON AN EPIDEMIC MILIARY SWEATING FEVER, WHICH RAGED IN THE DEPARTMENT of the OISE.

THE following is the account detailed by Dr. Menière.

"On the 9th of May, the Minister of Commerce and of Public Works was informed by the authorities of the department of the Oise, that a number of the districts were afflicted with an epidemic disease; and they requested that physicians might be sent to investigate its nature. The intelligence and petition were transmitted the same day to the Dean of the Faculty of Medicine. On the 10th Drs. Orfila, Pinel-Granchamp, Hourmann, and Menière set out for Beauvais, where the physicians and magistrates gave the requisite information. The disease proved to be the Miliary, or Picardy sweating fever, which had been observed in these localities several times before, and remarkably so in 1821. It broke out in the last week of April, or first of May, and was very mild, as, out of 84 patients, none had hitherto died. Its progress was noticed to be much arrested by cold weather. In some places its invasion was quite sudden after a storm, during which the thermometer rose considerably; and more than one half of the inhabitants of a village were thus seized in the course of one night. Females were more disposed to it than males. The disease commences with headache, sweating, and dispnœa; the skin then becomes red and very hot, and there is a most troublesome pricking sensation in the surface. No local pain; pulse full and soft. The dyspnœa appears to depend on a congestion of blood in the lungs and heart, and not on any weakness of any of the exterior respiratory organs: the plethora of the heart and large vessels is indicated by the ventricular pulsations being diffused, heavy, and slow, with little sound on auscultation. There is a distressing feeling of a choking weight in the præcordial region, and sometimes also in the epigastrium; the pulsations of the cœliac artery are so strong, as to heave up the abdominal parietes, and cause most obstinate gastralgia. The sweating is often prodigiously great, patients being obliged to change their shirts 20 or 30 times in the course of one night, and this "flux" continuing to the like extent for two or three days. Its odour was that of rotten straw, or of a weak solution of chlorine, or of the evacuations of the cholera morbus. The watery halitus from the skin is kept rarefied by the heat of the bed-clothes; when these are removed it is condensed, and forms a thick cloud, which speedily resolves itself into a sort of rain. The bowels are usually constipated, and the urine is scanty. The sweating lasts sometimes for four, five and six days, and it ceases gradually without the substitution of any other critical evacuation, or the occurrence of other symptoms; but in the majority of cases, a vesicular eruption on the chest, neck, back, and successively over all the body, appears on the second, third, or fourth day. It varies exceedingly in different patients: the vesicles are usually of the size of millet seeds—here and there a few larger ones are scattered. In the early stage the rash appears papular; when it dies away, the part is found covered with furfuraceous scales. The average duration of the fever, from its onset to the recovery of the patient, is from 8 to 14 days. The symptoms demanding most attention are those of congestion in the head and chest, threatening, in the one case, delirium and apoplexy—in the other, hæmoptysis and fatal dyspnœa.

The miliary epidemic of this year differs, in several important respects, from former eruptions of the disease; and it seems to have received a certain stamp from its more formidable brother, the cholera morbus, which exists at the same time in the same villages and districts. In the stead of the thoracic and cerebral symptoms, diarrhœa, vomiting, and gastro-enteritic irritation have frequently taken their place, and have carried off many of those affected with them. At Noailles, the chief feature of the epidemic was the cerebral congestion; while, at Cauvigny, only one league distant, it was congestion of the lungs, causing death sometimes in the space of a few hours.

There was no obvious difference in the topography of these two places to explain this diversity of character. In 1821, the disease raged severely at Cauvigny; there were 23 deaths, most of which were caused by the slow development of gastro-enteritic disease: in the present epidemic, death takes place at the very onset of the disease, or at the time of the miliary eruption, the patients suffering dreadful anxiety and distress at the præcordial region—racking pains and spasmodic stiffness of the back: sometimes they vomit, or rather hawk up, much frothy blood. At Chateau Rouge, many cases of what the French denominate "la suette exquise," that is, the sweating fever without any miliary eruption, were seen. In several patients, who were in a state of convalescence from the epidemic, symptoms of typhoid fever, such as stupor, emaciation, red patches on the belly, pulse frequent and soft, tongue red, and rough in the middle and towards the base, breath fetid, &c. supervened. From comparing the reports from 24 different districts in Picardy, it appears that, in the space of two or three days, not fewer than 5000 persons were seized with this epidemic disease. Many opinions have been offered to account for the frequent appearance of the miliary sweating fever in ancient Picardy; the miasmata of marshes and bad nourishment have been chiefly insisted upon, but we think incorrectly, as most of the patients were living in healthy dry localities, well housed, fed, and clothed, and frequently in affluence and ease. With regard to the occasional or exciting cause, there is little discrepancy of opinion: the elevation of temperature, and an electrical state of the atmosphere, have generally preceded the appearance of the malady. The miliary epidemic is fully as capricious in its course and career as the cholera; places being spared in the very line of its advance. It is certainly not contagious, as announced by the older authors.

Treatment. Formerly, when the disease was considered to proceed from a leaven, or poison, contaminating the blood, the efforts of the physician were directed to favour the expulsion of the peccant matter by sudorifics, cordials, warm ptisans and heavy bedclothes. Boyer, Tessier and others about the year 1773, introduced quite an opposite plan of cure. Venesection at the onset of the malady, mild tepid drinks, small doses of hypnotic medicines, and the very gentlest revulsive applications to the feet and hands, such as bathing them with mustard water are most proper; in short, whatever encourages the breaking out of the rash, which generally is accompanied with relief. Mild aperients are always useful. When symptoms of congestion in the lungs, or head occur, more active depletion and counter-irritation must be immediately adopted. We must be on our guard however not to lower our patient too much, as there is a strong tendency in this disease to nervous collapse. Whenever the eruption appears, the treatment ought to be limited to the mere regulation of the diet, &c. Many patients who have been bled at this period for dyspnœa, have rapidly sunk. The greatest care is necessary during the convalescence to prevent a relapse; every excitant, or irregularity must be studiously avoided.—*Archives Générales de Médecine.*

XVI.

ANATOMY AND PHYSIOLOGY OF THE OPTIC NERVES.

M. Ozanam of Lyons has lately directed his attention zealously to this subject, and the following is the result of his labours.

The optic nerves arise from the centre of the *nates*, by a minute white band, consisting of numerous fine fibrillæ, which wind round the anterior border of theoptic thalami, and join together at the corpus geniculatum externum. They seem to be blended, and incorporated at the point of junction, but we shall find that they are kept distinct from each other by a very thin membrane, which is a production of the dura mater; this forms a sort of pouch or bag full of a medullary substance of the consistence of cream. This arrangement may be most easily seen by extending a portion of the optic nerves on a tablet of polished dark wood, and then cautiously separating the junction with a blunt blade.

In order to arrive at a greater exactness, M. Ozanam placed between two plates of glass in a solar microscope, the optic nerves of a person who had just died of encephalitis; the nerves were detached three lines before their junction, and six lines beyond this point. The image thus formed was so magnified, as to appear six feet long, and three feet broad, thus occupying an area of 18 square feet; each nerve seemed to be eight inches round, and the membrane, or interposed pouch two feet across. If these observations be correct, it follows that the optic nerves do not decussate each other where they meet; we may suppose however that there is at their origin a mediate communication between them by the cerebral pulp, and by the nutritious bloodvessels. A similar connexion may exist at the point of junction; for it is highly probable that the pouch and contained fluid may serve such a purpose. —*Archiv. Gener.*

XVII.

OFFICIAL REPORT ON CHOLERA, BY THE ROYAL ACADEMY OF MEDICINE OF FRANCE.

THE Royal Academy of Medicine has been called upon a second time by government to report their opinion on this frightful scourge. The first report was occupied with a summary of the documents which had been transmitted to them from foreign countries where the disease was raging; but since that time, it has reached our own shores, and entered our own habitations; and the details which are now presented to the public are drawn from direct experience. It was between the 22nd and 26th of March, that the cholera broke out at Paris. Before this period indeed some isolated occurrences, and doubtful cases had been noticed in the metropolis; but neither the towns, nor villages situated on the frontiers of countries then infected, had afforded any unequivocal cases of the epidemic. The disease suddenly encreased to an alarming extent in a quarter of Paris which had less communication with strangers than with any other; and situated at a distance from the post-houses, inns, or even the streets, where strangers, goods, and provisions arrived from such countries, as were at the time suffering from it. At first those classes which were ill clothed, fed and housed, and addicted to debauchery and excesses, were chiefly the victims; and it was observed at that time to attack the different inmates of a dwelling sometimes simultaneously, at other times, one after the other. As a general fact, however, it may be stated that in the greater number of instances, at least among the more respectable society, one only of a family was seized. The members of the medical profession, though much more exposed to its influence than any other individuals, have certainly not suffered in a greater proportion than the rest of the population. The same observation is applicable to those who immediately attended on the patients, as nurses, servants of hospitals, relations, and clergymen. A statistical account will be published at a future period under the authority of government. The disease, on its first appearance, displayed its full intensity and virulence; but soon various forms and modifications were observed. Its attack was sometimes instantaneous; at other times preceded by premonitory symptoms.

A large proportion of the inhabitants have experienced more, or less, what may be termed the influence of the epidemic, characterized by weariness of the limbs, sleeplessness, heaviness in the head, lowness of spirits, loss of appetite, constipation, and scantiness of urine.

The disease was ushered in, sometimes with headach, or cramps of the extremities; at other times with vomiting; but most frequently the diarrhœa was the earliest warning; and if the attack was not suddenly alarming, these symptoms continued for several hours, or even days. Then followed the prostration of strength, feeling of weight, anguish and heat in the epigastrium, extending from the precordial region to the throat; nausea, borborygmi, dryness of the mouth, purging, and great feebleness of the pulse. The alvine evacuations were sometimes bloody; of a yellow, green, or even brown colour, and mixed with a white mucous discharge, but generally they had all the appearance of thickish rice-water, and were squirted out as if by the jet of a syringe. The blood drawn was black, coagulated, and pitchy; when allowed to rest, very little serum separated; and it was only rarely that slight traces of any buffiness were observed on the clot. The form of the disease now described has been by some very improperly designated cholerina; it must be regarded as cholera of the mildest degree, and occurs only under favorable circumstances. When more concentrated, and malignant, the disease exhibits the two formidable phases, viz. the cold stage; and the stage of reaction. When death took place in the cold stage, it was not unfrequent to observe the cessation of all vomiting and purging, and the patients to state that they felt better, when they had only a few moments to live. The transition from the cold stage to that of reaction, was too frequently chequered with repeated alternations of heat and of coldness, quickly succeeding to each other. In a few rare cases the cholera commenced with all the symptoms of the stage of reaction. The severity of the one stage appeared to have no influence upon or connexion with that of the other; sometimes the cases of most appalling iciness recovered without any subsequent febrile symptoms; and many patients died during the stage of reaction, although the cold stage had been short and imperfect. During convalescence, the slightest error of diet, trifling fatigue, exposure to cold, or damp, and mental emotions, often induced a fatal relapse. One attack of the disease did not necessarily secure the person from all danger of a second. In the course of the epidemic, several well authenticated instances of "cholera recidiva" have been reported. It even appears that by having once suffered from the agony of the epidemic, the system is more susceptible of its attacks, and more liable to relapses.

With respect to the pathology of cholera, it ought particularly to be noted in each case of dissection, what had been the character of the individual attack, and the duration of the disease, as upon these the extent and magnitude of the morbid changes are intimately dependent. In many of the formidably rapid examples, in which death had taken place, within three or four hours, scarcely any appreciable lesions were to be discovered. The corpses were generally of a purplish colour; the subcutaneous muscles formed prominent lines along the surface, the face and hands were much shrunk, and the fingers were strongly contracted. The pharynx was almost always normal; œsophagus generally so; but sometimes slightly red, and studded with enlarged mucous follicles. The stomach has in many cases been found not sensibly altered; commonly however, its mucous surface was highly red, either in patches or throughout its extent, and this appearance was accompanied occasionally with ramollissement of its texture. In the intestines a turbid white fluid with flocculi was found; and the mucous surface of the bowels was coated with a creamy substance. This coat was often highly inflamed and injected with red vessels, or patches were infiltrated with actual blood. In a large proportion of cases the glandulæ Brunneri, et Peyeri were magnified and very conspicuous, especially in the first convolution of the small gut, and also in the lower ones, near the termination of the ilium in the colon. The urinary bladder was invariably contracted and empty; its mucous surface was generally encrusted with a white softish layer, similar to that found in the intestines; and this appearance was sometimes traced in the ureters, and even in the pelvis of the kidney. The heart and large vessels gorged with black, half coagulated blood, which had much the aspect of currant jelly; and which had manifestly been deprived of much of its watery portion. All the serous membranes were unusually dry; most of the viscera were more or less injected with blood, and were of a blueish or black colour. Gall-bladder large and distended with thick bile. No morbid traces were discovered in the nerves, either of animal, or of organic life. The bones, in some cases, were found to be highly injected and had acquired the colour of the blood, as if the patient had died of ostitis.

The specific and essential cause of cholera is quite unknown; but numerous and well ascertained are the causes which favour its attack, and promote its virulence. Whatever enervates the body, as excesses of all kinds, insufficient, or unwholesome nutriment, vicissitudes of climate, and depressing mental emotions strongly predispose individuals to its influence. The disease successively invaded the different quarters of the metropolis; but what guided its march, and directed its onset, baffled all enquiries. It is not quite easy to explain how a regular, sober, and active mode of life proved so good a preservative; but so it was; for very few cases were seen in the numerous colleges, schools, religious and charitable establishments dispersed over the city.

Treatment. Hitherto no exclusive, or specific mode of treatment has been discovered. In the very commencement of the disease, at least in the young and plethoric, bleeding by the lancet and by leeches were of immense service; aromatic mucilaginous drinks, aerated, or acid water, lemonade, &c. were given; sometimes tepid baths, frictions on the surface, and mustard poultices according to the circumstances of the case. Emetics of ipecacuan were occasionally very useful in changing the character of the vomitings and purgings from the whitish and flocculent fluid, to true bilious evacuations, or causing them to stop altogether; in promoting perspiration and resuscitating the animal energies. In the cold stage, our efforts must be directed to restore the warmth and circulation, by hot baths, &c. Ice has been very successfully given at this period by some; others have preferred iced punch, strong wines, coffee, and tea. Blisters, sinapisms and embrocations have occasionally been of use, and the following mode of irritating and cauterising the skin has been recommended. Take a long piece of woollen stuff, of the length of the back, and six inches wide; soak it in a mixture of 8 parts of spirit of turpentine, and one part of liquor ammoniæ, and apply it along the spine; over this lay a linen cloth wrung out of hot water; and then pass along this a heated iron, which is to be made sufficiently hot to cause the fluids to be volatilised, and the cloths to be nearly dried. This operation must be repeated every hour, till a decided improvement in the patient's state has taken place. Venesection and bleeding by leeches in the extreme cold stage have been praised by some. Emetics have been also tried with some success.

In the third stage, or that of re-action, symptoms of typhus fever usually occurred; but varied in their character from high irritation and excitement, to great depression and debility. Cerebral, pulmonic, and abdominal congestions were not unfrequent, and had to be combated with depletion and counter-irritants. Ice kept applied to the head for six or eight hours, and warm simple opiate or stimulating poultices to the lower limbs were of obvious utility. During the convalescence from an attack of cholera, a tendency to diarrhœa often continued obstinately: to counteract this, leeches to the anus, rice drinks, decoction of rhatany root, and small doses of opium were best adapted. Enemata, consisting of the rhatany decoction, with, or without opium, were also employed with much advantage. Powdered vegetable charcoal in doses of ʒss every hour had good effects in restraining the diarrhœa, and in restoring it to a healthy bilious condition. To quiet the cardialgia and vomiting, nothing has been found so useful as ice, and cutaneous revulsive applications. The cramps were treated by bleeding, warm baths, opium, bismuth, anodyne frictions, a circular ligature of the limbs, &c.—*Archiv. Général.*

Remarks on the preceding Report. We have presented to our readers the protocol of the learned commission appointed by the Academy of Sciences, not because we consider it an important or valuable document, but because it ought to have been so, and we expected that it should be so. Surely the duty of a scientific body of men is something beyond the mere bulletinising and chronicling every varying and unsteady feature of a disease, describing every symptom, already so well known; detailing every mode of treatment however whimsical and inefficacious, registering every pathological appearance, and too often also inserting shallow conjectures and unsubstantial theories. Not one fact is added to our knowledge; nor one novel conclusion submitted to our reason. If it be answered that the report was drawn up for the guidance and instruction of the public in general, we hesitate not to say that in this point of view, it is yet more faulty; and not at all calculated to serve this end. No unprofessional person can possibly thread his way through a pamphlet of 20 closely printed pages, in which he finds himself bewildered among the numerous distinctions of the disease itself, puzzled with post-mortem appearances in facts about which he knows nothing in a state of health, and made disconsolate by being informed that no treatment is of almost any avail; in short if he comes to any conclusion, it must be that doctors everlastingly differ among themselves, and make experiments on their patients, rather from curiosity than from any rational, or well-grounded hopes of cure.

We have patiently, and with much fatigue examined almost every contribution on the subject of cholera in the French periodical press, in order that we might be able to communicate to our readers, all useful information on so interesting a subject; but hitherto we have laboured to little purpose; and nothing but the discovery of thrice-told tales, and of endless theories has been our reward.

It is gratifying to reflect that our own countrymen better deserve our praise and approval; their labours have certainly been more fruitful in the vineyard of enquiry, and may lead to still more satisfactory and agreeable results.

XVIII.

MEMOIR OF THE LAST ILLNESS AND DEATH OF BARON CUVIER.

OBS. The following account was drawn up by Dr. Rousseau who attended the deceased.

CUVIER was a man who had an astonishing aptitude for mental labour and exertion; his recreation indeed consisted in being busily employed; yet he was readily alarmed about any trifling indisposition, and although he put little trust in medical science, he used to consult every doctor he knew on the state of his health.

On Monday the 7th of May he experienced a little irregularity in his bowels, and was ordered to take an additional enema with 6 drops of laudanum in it. Next day he felt himself quite well; and delivered a lecture in the College of France, displaying unwonted energy and animation; and after lecture he walked home, a thing he seldom did. He dined as usual, and was present in the evening at the meeting of the professors of the museum. On the Wednesday he felt a pain in the right shoulder and arm; and some difficulty in closing the right hand; he attended however a state council, and on his return, was urgent for his dinner; but scarcely had he eaten some broth, before he experienced such a difficulty of swallowing any solid food, that he was obliged to make the attempt several times. His family became alarmed and sent for his physician Dr. Allard, who prescribed 20 leeches to the anus. On the following morning he could not move his right arm, and was obliged to rest it in a sling. The pulse was 80 to

85, the deglutition still difficult, and there was some headach. He was freely bled; had a mustard bath to the feet, and a blister to the nape of the neck; he felt very weak, and his voice became sensibly changed; he was restless during the night; and as the pulse again rose in fullness and strength, a second bleeding from the arm was performed. From this time the muscular energies were much impaired; but the heat of the body, nervous sensibility, and intellectual powers were remarkably entire. On the Friday an emetic was given, as the patient had not apparently derived benefit from the venesection: but it did not produce vomiting, but slightly purged the bowels. At two o'clock M. Dupuytren introduced by means of an œsophageal tube and syringe 24 grains of ipecacuan mixed in a little warm water; still no vomiting followed. At five o'clock 48 grains were injected into the stomach, without causing even any nausea. At seven o'clock a saline enema was administered, which brought on an extreme purging of dark-coloured bilious stools. The right arm was quite powerless; deglutition impossible. Two blisters were applied to the side of the neck in the evening, over the site of the cervical plexuses. The night was passed in an agitated and restless state. On Saturday morning, there was observed a palsy of the movements of the left leg, in addition to the previously mentioned symptoms; the hands became very cold, and the nails acquired a blue colour; the pulse was smaller and weaker than hitherto. Twenty leeches were applied over the mastoid process; in the night, the patient suffered great distress from not being able to move himself at all in bed—and on the Sunday, his appearance seemed as if he had become ten years older; his voice was more changed; still he was calm and complained but little. Cupping glasses were applied below the kidneys, and some orangeade was injected into the stomach; at eight o'clock in the evening he conversed with Dr. Allard; he was again cupped, and was extremely fatigued by the operation. At nine o'clock he said that the faculties of his mind were leaving him, and a quarter before ten he died sitting upright in his arm-chair. The head was measured, and round the greatest circumference was 22 inches, 4 lines. From the occipital fossa, along the vertex to the roof of the nose, it was 13 inches and 4 lines; from one meatus auditorius to the other, 15 inches. The facial angle was very large. The spinal canal was most cautiously opened, and the marrow and its membranes examined; but no trace of disease found. The cranium was of very ample dimensions. The cerebral convolutions were very numerous, and the furrows between them very deep; on many of the convolutions were observed mamillary protuberances, which formed an integral part of their substance. Each portion was most attentively inspected, and layer after layer examined; but all was found healthy. The lateral ventricles were very large, but contained little serum. The left choroid plexus presented two small cysts full of a transparent fluid, and very like in appearance to two granules of a white currant. The mass of the cerebrum weighed 3 pounds, 11 ounces, 4 drachms and a half; the cerebellum, when detached from this mass weighed 6 ounces and 1 drachm. The pharynx and œsophagus were perfectly healthy; the brachial nerves equally so. The processus dentatus of the second cervical vertebra was very large; and the third cervical, as well as several of the dorsal vertebræ had osseous excrescences on their anterior aspects, where one bone was united to another. This occurrence explains the great difficulty which Cuvier experienced in stooping forward to collect any things lying on the ground. The thoracic viscera were healthy; much fat was found in the mediastinum. In short, no obvious morbid change could be discovered in any part of the body; hence some have attributed the death of Cuvier to the epidemic influence of the cholera; but this is only a gratuitous conjecture, and not confirmed by a single symptom during life.

The character of this great man has been thus portrayed by an eminent writer. Cuvier was gifted with a mighty and capacious mind, rather than with any striking genius. His intellectual powers, were rather of a critical than of a didactic character; and as is the case with most encyclopediacal heads, he had a leaning to scepticism. His mind was clear, rapid, rigorously exact, but not sufficiently bold; and perhaps we may account for this deficiency, by calling to mind that the requisite mental hardihood is generally intimately associated with a resolute firmness of character, which Cuvier to a certain extent did not possess. In his lectures, when conveying instruction, and elucidating any subject, there was a spirit of modest circumspection, and a fondness for demonstrative proof, which belonged as much to the original stamp of his character, as to the philosophical genius of the present age in France. An unwearied, and most keen observer, gifted with a prodigious memory, and a capacity for mental labour, rarely possessed. He has left behind him numerous important works. Of universal knowledge, Cuvier knew every subject sufficiently well, to render his description or illustration of individual examples more perfect and complete. As a writer, he has little grandeur, or originality; but his works bear the impress of great thought:—his style is perspicuous, elegant, and correct. He describes things, not as a painter, but as an anatomist; he argues with ability, but his reasonings are stiffly and coldly expounded; he narrates, as a chronicler, rather than as a philosophical historian. His mind wanted the aid and influence of a mighty inward impulse, to inspire him with that passionate enthusiasm for the study of Nature, which in other language, is merely the thirst after Truth; it was his exquisite taste, and a natural aptitude for the sciences which he especially cultivated, which led him on to that proud distinction above all his cotemporaries.

Cuvier was born on the 25th of August, 1769, at Montbeliard, and consequently at his death was 63 years old.—*Archiv. Génér.*

XIX.

Remarkable Emphysema of the Lung. Examination of Mr. M——y, July 3, 1832.

Present Mr. Thomas, Dr. James Johnson, Mr. Henry Johnson, and another Medical Gentleman.

Upper extremities and upper part of trunk attenuated—subcutaneous cellular membrane of lower part of trunk and of lower extremities anasarcous.

Thorax. On removing the sternum and cartilages of the ribs the right lung appeared extremely prominent, and did not collapse in the slightest degree. The left lung, though not so distended as the right, shewed no tendency to collapse when the chest was opened. On examination the lungs presented a very extraordinary specimen of emphysema, which was much more developed in the right than in the left. The whole lung was of great dimensions, nodulated as it were, and irregular, but light and in many parts elastic. The emphysematous appearance was chiefly noticed at the free margins of the lobes, which were rounded off, turgid, and globular in shape, from the extravasation of air into the cellular texture of the organ. The appearance presented was not a mere string of air vesicles, which are not unfrequently met with in the examination of dead bodies, but a continuous emphysema of extent and magnitude. Attached to the lower lobe was a sort of distinct cyst, much larger than an egg, perfectly pellucid, and containing air. The wall of the cyst appeared to be formed of the pulmonary pleura. The whole substance of the lung was evidently more or less emphysematous, except in parts where induration was felt, occasioned probably by hepatization. The left lung presented similar appearances, but in a less marked degree. There was some serous fluid in the right side of the chest. As the lung was removed by Mr. Thomas, in order that it might be preserved in the Museum of the College of Surgeons, no section of it was made, for the purpose of examining its structure more minutely.

The heart was much enlarged. The right auricle was dilated and somewhat hypertrophied—the right ventricle dilated, without much hypertrophy—the ostium venosum of large dimensions. The left auricle was dilated—the left ventricle dilated and hypertrophied. The semilunar valves of the aorta presented some ossification at their attached margins, but the alteration was not such as to prevent them from executing their proper functions. Perhaps they might have offered some little obstruction to the exit of the blood from the ventricle. The aorta was generally flabby, and somewhat dilated.

Abdomen. The liver was large, hard, dark-coloured; it descended low in the abdomen and presented a very decided margin. No other appearance of consequence presented itself.

Cranium. Not examined.

Remarkable state of Lung. The patient, whose dissection is appended, was a stationer in Tottenham-court-road, who had laboured for twenty years and more under what is usually termed asthma. He did not come under the observation of Dr. Johnson till within a few months of his death, when he was dropsical, in trunk, abdomen, and extremities. The breathing was so laborious that he could not lie down at all, and he was harassed with constant cough. On examination the heart was found to be greatly enlarged. It was difficult to say what was the actual condition of the lungs. By some brisk doses of elaterium, with extract of colocynth and the pilula hydrargyri, the dropsical swellings disappeared—the breathing became free—and he was able to go out to Hampstead and other places daily for air. But the state of the heart continued the same. After many fluctuations, the dropsical effusions returned—the medicines lost their power, and he died in a slow and gradual manner, leaving an express wish that his body should be examined by Mr. Thomas and Dr. Johnson.

XX.

ON THE STRUCTURE OF THE HUMAN PLACENTA, AND ITS CONNEXION WITH THE UTERUS. By DR. ROBERT LEE.

[*From the Philosophical Transactions.*]

THIS indefatigable and able physician pursues his physiological and practical labours with assiduity and success. The structure and connexion of the placenta have puzzled most of our anatomists, up to the present hour. So far back as 1780, John Hunter presented a paper to the Royal Society, claiming the discovery of ascertaining the true structure of the placenta. The following is the history of the appearances which he observed in the dissection of a woman who had died undelivered near the full term of utero-gestation, and on which his conclusions respecting the structure of the organ were founded.

"The veins and arteries of the uterus having been injected, an incision was made through the parietes, at the anterior part where the placenta adhered to the internal surface. Between the uterus and placenta lay an irregular mass of injected matter, and from this mass regular pieces of the wax passed obliquely between it and the uterus, which broke off, leaving part attached to that mass; and on attentively examining the portions towards the uterus, they plainly appeared to be a continuation of the veins passing from it to this substance, which proved to be the placenta. Other vessels, about the size of a crow-quill, were seen passing in the same manner, although not so obliquely. These also broke on separating the placenta and uterus, leaving a small portion on the surface of the placenta; and on examination they were discovered to be continuations of the arteries of the uterus. The veins were next traced into the substance of what appeared placenta; but these soon lost the regularity of vessels, by terminating at once upon the surface of the placenta, in a very fine spongy substance, the interstices of which were filled with yellow injected matter. He then examined the arteries; and tracing them in the same manner towards the placenta, found that, having made a twisted or close spiral turn upon themselves, they were lost on its surface.

On cutting into the placenta, he discovered in many places of its substance yellow injection, and in others red, and in many others these two colours mixed. The substance of the placenta, now filled with injection, had nothing of the vascular appearance nor that of extravasation, but had a regularity in its form which showed it to be naturally of a cellular structure, fitted to be a reservoir for blood.

From these appearances Mr. Hunter infers, 'that the arteries which are not immediately employed in conveying nourishment to the uterus go on towards the placenta, and proceeding obliquely between it and the uterus, pass through the decidua without ramifying. Just before entering the placenta, after making two or three close spiral turns upon themselves, they open at once into its spongy substance, without any diminution of size and without passing behind the surface as above described.

'The veins of the uterus appropriated to bring back the blood from the placenta, commence from this spongy substance by such wide beginnings, as are more than equal to the size of the veins themselves. These veins pass obliquely through the decidua to the uterus, enter its substance obliquely, and immediately communicate with the proper veins of the uterus. This structure of parts points at once to the nature of the blood's motion in the placenta. The blood detached from the common circulation of the mother moves through the placenta of the fœtus, and is then returned back into the course of the circulation of the mother to pass on to the heart.'

Dr. W. Hunter's description of the vascular connexion between the uterus and placenta coincides with that of his brother.

'For it seems incontestable (he observes) that the human placenta, like that of the quadruped, is composed of two distinct parts, though blended together; viz. an umbilical which may be considered as a part of the fœtus, and an uterine which belongs to the mother; that each of these parts has its peculiar system of arteries and veins, and its peculiar circulation, receiving blood by its arteries and returning it by its veins; that the circulation through these two parts of the placenta differs in the following manner:—in the umbilical portion the arteries terminate in the veins by a continuity of canal, whereas in the uterine portion there are intermediate cells, into which the veins begin.'

These two brothers came to a quarrel respecting the priority of this discovery! Their doctrines or facts have not been called in question for the last 40 years. Nevertheless our author proposes in this paper to describe certain appearances which he has observed during the examination of six gravid uteri; and many placenta expelled in natural labour, which seem to "demonstrate that a cellular structure does not exist in the placenta, and that there is no connexion between this organ and the uterus by great arteries and veins."

"If an incision be made through the parietes of the gravid uterus, where the placenta does not adhere, the membrana decidua will be observed lining the internal surface, and numerous minute blood-vessels and fibres passing from the inner membrane of the uterus to the decidua. At the circumference of the placenta, the membrana decidua separates from the chorion and amnion to pass between the uterus and placenta, and thus forms a complete membranous septum, which is interposed betwixt these organs. The chorion and amnion cover the fœtal surface of the placenta; and between these two membranes and the decidua lie the ramifications of the umbilical vein, and arteries subdivided to an almost indefinite extent, and connected together by white slender filaments running in various directions. The placenta thus consists solely of a congeries of the umbilical vessels, covered on the fœtal surface by the chorion and amnion, and on the uterine surface by the deciduous membrane, and inclosed between these membranes; it adheres to the fundus, or some part of the uterus by innumerable flocculent fibres and vessels.

On detaching the placenta carefully from the uterus, the deciduous membrane is found to adhere so closely to the umbilical vessels which it covers, that it is impossible to remove it without tearing these vessels. With the fibres uniting the placental decidua to the uterus are mingled numerous small blood-vessels, proceeding from the inner membrane of the uterus to the decidua; and these vessels, though more numerous at the connexion of the placenta with the uterus, exist universally throughout the whole extent of the membrane. There is no vestige of the passage of any great blood-vessel, either artery or vein, through the intervening decidua, from the uterus to the placenta; nor has the appearance of the orifice of a vessel been discovered, even with the help of a magnifier, on the uterine surface of the placenta. This surface of the placenta deprived of the deciduous membrane presents a mass of floating vessels, its texture being extremely soft and easily torn; and no cells are discernible in its structure, by the minutest examination.

At that part of the surface of the uterus to which the placenta has been adherent, there are observable a great number of openings leading obliquely through the inner membrane of the uterus, and large enough to admit the point of the little finger: their edges are perfectly smooth, and present not the slightest appearance of having been lacerated by the removal of the placenta. In some places they have a semilunar or elliptical form, and in others they resemble a double valvular aperture. Over these openings in the inner membrane of the uterus, the placenta, covered by deciduous membrane, is directly applied, and closes them in such a manner that the maternal blood, as it flows in the uterine sinuses, cannot possibly escape either into the cavity of the uterus, or into the substance of the placenta. The above appearances on the inner surface of the uterus have been accurately represented by Rœderer; from whose work fig 1. of Plate I. is taken.

When air is forcibly thrown either into the spermatic arteries or veins, the whole inner membrane of the uterus is raised by it; but none of the air passes across the deciduous membrane into the placenta, nor does it escape from the semilunar openings in the inner membrane of the uterus, until the attachment of the deciduous membrane to the uterus is destroyed. There are no openings in the deciduous membrane corresponding with these valvular apertures now described, in the internal membrane of the uterus. The uterine surface of the placenta is accurately represented in fig. 2. Plate I.

If a placenta be examined which has recently been separated from the uterus in natural labour, without any artificial force having been employed, its surface will be found uniformly smooth, and covered with the deciduous membrane; which could not be the case, did any large vessels connect it with the uterus. The placenta in a great majority of cases is also detached from the uterus after labour, with the least imaginable force; which would be impossible if a union by large blood-vessels, possessing the ordinary strength of arteries and veins, actually existed. Besides, a vascular connexion of such a kind would be likely to give rise, in every case, to dangerous hemorrhage subsequent to parturition, a circumstance not in accordance with daily experience."

The following observations are offered by our author as reasons why his predecessors have fallen into error in their anatomical researches.

"Noortwych, Rœderer, Haller, Dr. W. and Mr. J. Hunter, and Dr. Donald Monro, do not appear to have examined the gravid uterus and its contents in the natural state of the parts, but after fluids had been forcibly injected into the hypogastric and spermatic arteries. The laceration of the deciduous membrane covering the orifices of the uterine sinuses followed this artificial process, as well as the formation of deposits of injection in the vascular structure of the placenta, giving rise to the deceptive appearance of cells. That this took place in the examinations made by Rœderer* and Monro†, does not admit of dispute; and the following facts render it more than probable that the HUNTERS were also misled, by the effects of artificial distension of the placenta, from the extravasation of the fluids forced into the uterine vessels.

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* Icones Uteri humani, Observationibus illustratæ. J. G. Rœderer, 1759.

† Essays and Observations, Physical

In the course of last autumn, the preparations of the gravid uterus in the Hunterian Museum at Glasgow were examined at my request by Dr. NIMMO; and in none of them does it appear certain that any great blood-vessels pass from the uterus into cells in the placenta; but in many the deposits of injection, causing the appearance of cells, were observed evidently to be the result of extravasation. No preparation in the collection seems to have been expressly made for the purpose of proving or disproving the fact that the deciduous membrane passes over the uterine surface of the placenta; but in reference to preparation R. R. No. 139, it is observed by Dr. NIMMO that no vascular openings are visible in the membrane interposed between the uterus and placenta.

No. 178 'is a small section of the uterus with the veins injected green, and broken off where they were entering the placenta.' The surface of the injected matter is smooth; the edges of the openings defined and quite unlike ruptured vessels; their form in general elliptical, seeming as if they were holes cut in the side of a convolution.

No. 125. 'A portion of uterus and placenta, the latter injected from uterine vessels.' There is an opening which seems to be natural, corresponding to one of those in the uterus; but the majority of those whereby the injection has passed into the placenta seem to be mere lacerations.

No. 101. 'A section of uterus with veins injected black, and the injected matter protruding by irregular plugs into the cavity of the uterus.' The holes are semilunar and elliptical, with defined edges, and nothing resembling the continuation of vascular tubes to be seen.

R. R. 121, is described in the printed Catalogue as follows: 'A small portion of placenta and uterus, where the cells of the placenta have been injected from the veins of the uterus. The veins are seen very large, entering the substance of the placenta.'

Dr. NIMMO makes the following observations on this specimen: "This preparation seems to be most in point. I would describe it differently. The cellular substance of the placenta has certainly been filled from the uterine vessels. These, however, instead of passing directly into the placenta, are distinctly seen applying their open mouths to the membrane of the placenta, where the injection in some instances stops. The membrane is thinner here than where no vessels are applied, consisting, so to describe it, of one layer, while a second layer covers all other parts. Where the injection has passed into the substance of the placenta, it has evidently been forced to the side between the layers, and found some weak point, whereby it has entered into and been diffused throughout the cellular texture of the placenta.*"

From the foregoing facts, our author thinks he may safely conclude that the human placenta does not consist of two parts, maternal and fœtal—that no cells exist in its substance—and that there is no communication between the uterus and placenta by large arteries and veins. The whole blood sent to the uterus by the spermatic and hypogastric arteries, (except the small portion supplied to its parietes and to the membrana decidua by the inner membrane of the uterus) flows into the uterine veins or sinuses, and, after circulating through them, is returned into the general circulation of the mother by the spermatic and hypo-

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and Literary, read before a Society in Edindurgh, 1754,. Vol. I.

* My friend SAMUEL BROUGHTON, Esq. F.R.S., during a recent visit to the Hunterian Museum at Glasgow, exexamined the preparations of the placenta and uterus at my request, and authorizes me to say that his observations fully confirm the accuracy of Dr. NIMMO's statements.

gastric veins, without entering the substance of the placenta.

"The deciduous membrane being interposed between the umbilical vessels and the uterus, whatever changes take place in the fœtal blood, must result from the indirect exposure of this fluid, as it circulates through the placenta, to the maternal blood flowing in the great uterine sinuses."

There is appended to the paper a valuable communication from Mr. Owen respecting the anatomy of the uterus and placenta, and the whole is illustrated by two expressive plates.

XXI.

OBSERVATIONS ON VARIOUS DISEASES. By ROBERT J. GRAVES, M.D.

UNDER this head, Dr. G. has communicated, through the medium of our Dublin cotemporary (No. II.), some facts, elucidatory of the nature of diseases and the operation of remedies. The observations are practical, and not speculative.

1. *Ptyalism.* This was a case of profuse secretion of saliva, independent of mercury. The patient (a female) first had leucorrhœa, which suddenly ceased, and was succeeded by anasarca. This disappearing under proper remedies, was followed by gastric irritation; upon the disappearance of which a profuse ptyalism ensued, which resisted purgatives, tonics, gargles, and various other remedies.

"In twenty-four hours she spits more than a pint and a half of fluid, consisting of a whitish, viscid mucus, secreted by the mucous membrane of the fauces and back of the pharynx, from whence it is thrown into the mouth by a *hawking*, renewed every two or three minutes, with scarcely any interruption either during the night or day, and rendering the patient truly miserable from want of sleep. The throat and fauces are pale, and their soft parts extremely flabby and relaxed, although there is a constant irritation in the throat in consequence of the presence of an unnatural quantity of mucus, yet no soreness is felt, neither do the parts appear inflamed. The salivary glands are not concerned in the disease, and do not secrete more than the usual quantity of fluid. Her appetite is very bad, her skin dry, and she has a haggard, emaciated countenance.

The well-known good effects of opium in several diseases of increased secretion, diabetes, diarrhœa, and certain forms of dropsy, suggested to me the trial of this medicine in the apparently almost hopeless case I have related, and I accordingly ordered the patient one grain of opium every fourth hour. On the following day, she returned to inform me that she had slept during the whole night, and on awaking had no return of the spitting. Her joy was great, and she and her friends considered the effect of the pills, in thus suddenly stopping the spitting, as most extraordinary; and I must confess, that my surprise was almost equal to their's.

She then told me, that several medical students who lived in her house, and who had witnessed the previous violence and obstinacy of her complaint, had been so much struck by its sudden cessation under the influence of the pills, that she was commissioned by them to inquire what I ordered. I mention this circumstance, to shew how very remarkable was the benefit she received from the opium. The pills were continued for some days, when the quantity of opium was augmented on account of some recurrence of the spitting; unfortunately they induced constipation of bowels, and, consequently, she has been frequently obliged to leave them off, but she is, on the whole, much improved in health, and although she is still subject to the disease, its severity is comparatively trifling, and it uniformly disappears almost entirely when she recurs to the use of opium. She visited me this day, the 18th of March. In connexion with this subject I may observe, that a lady, a patient of mine, who took a large quantity of mercury many years ago, has been ever since subject to occasional returns of salivation, in every respect resembling that produced by mercury. During these fits, which are always brought on by exposure to cold, the mouth is sore; the gums red and swollen; the salivation copious, and the breath is strongly impregnated with the mercurial fetor. Several such cases have been recorded by others, and are extremely instructive, proving that the deleterious effects of mercury on the system may lie long dormant, and be afterwards suddenly called into action by various causes. In this way we may explain the attacks of periostitis, to which persons who have been mercurialized, are often liable for years, upon exposure to cold. Formerly such attacks were indiscriminately attributed to a remnant of the syphilitic taint, but I have witnessed the same occurrence in persons who had no syphilitic disease, and who had taken mercury for other complaints. One of the most violent attacks of periostitis I ever witnessed, followed salivation in a lady to whom mercury had been given several months before, for the cure of peritonitis. To conclude, I have seen many cases totally at variance with the assertion of Ballingall and others, that the secondary symptoms, attributed by recent authors to mercury, are owing to lues; not being observed, as they state, except in cases where that medium had been exhibited for the cure of the venereal disease. The venereal poison produces a peculiar train of primary and secondary symptoms. The mercurial another, and that not very dissimilar. Experience has proved, that in general the venereal symptoms yield to the action of mercury, but occasionally this is not the case, in consequence either of some constitutional peculiarity, or an injudicious use of this mineral, and thus the constitution labours under a modified disease, resulting from the combined effects of the two poisons. Attention to the effects of the remedy in the first instance, will generally prevent the occurrence of so disastrous a complication. My own experience has convinced me, that the majority of venereal cases may be cured by the non-mercurial plan of treatment; but whenever the disease, whether primary or secondary, proves more than usually obstinate, the practitioner should then have recourse to mercury; the previous treatment will render its curative influence at once safer and more energetic."

2. *Cold Affusion in Convulsions.* This remedy in the convulsions of children has not attracted much attention. Dr. Graves, having witnessed the good effects of the remedy, appears to have followed up the practice. The following case he offers as an example. A young gentleman, nine years of age, was convalescing from scarlatina, when anasarca, and afterwards convulsions, occurred. The fits were very violent, and the youth appeared moribund, his eyes being distorted, void of expression, and fixed—face cadaverous—extremities cold—pulse feeble, and 150.

"In addition, he appeared to be nearly destitute of muscular power, and in the interval between the fits was unable to speak, while a loud tracheal râle seemed to announce the near approach of death. As I have detailed the symptoms of the case with the most scrupulous fidelity, and without the least exaggeration, I need scarcely add, that our patient's case appeared utterly hopeless. Our first step was to place him in the arms of a strong nurse-tender, who maintained him as nearly as possible in the sitting posture; our object in this was to relieve the lungs, and diminish the cerebral congestion. Those who have watched over the dying, are aware that the final struggle may be often much protracted, by frequently changing the patient's position in bed, and particularly by avoiding the horizontal posture. This mode of proceeding, by preventing the gravitation of the blood to any one part of the lungs, and by counteracting the accumulation of mucus in any particular portion of the bronchial tubes, causes both to remain for a longer time pervious to the air, and favours the last efforts of the respiratory apparatus. We next proceeded to pour a small stream of cold water from a kettle on his head, the effects were extremely satisfactory, for in a short time the eyes assumed a more natural appearance, and lost the spasmodic fixedness, while the pulse became more and more distinct, and diminished in frequency; in short the violence of the fit soon subsided, he was able to expectorate the mucus which had clogged the larger air-passages, and had caused the *rattles*,* and in the course of half an hour a very marked improvement was perceptible, the patient being then able to speak and swallow. The convulsions, however, returned several times during the ensuing day, but at each recurrence, their duration was lessened, and their violence diminished by the cold affusion. Sitting by the bed of this patient, I more than once was able to predict the immediate approach of the fit, by means of watching the pulsation of the carotids, which then became much more frequent and stronger. This observation, in connexion with the fact, that the pulse at the wrist became weaker and more indistinct at that very moment, suggests many interesting considerations concerning local determinations of blood.

It is almost unnecessary to remark, that the time we had so unexpectedly gained was not spent in inaction, and that we immediately had recourse to various other active remedies, such as leeching the neck, purgative injections, and mercurials, administered both internally and externally, with a view of affecting the mouth rapidly. In addition to the modes of applying mercury usually employed, I can recommend the application of the ointment to the armpits; this alone will frequently affect the mouth in a few days. The motions of the patient's arms here perform the office of friction, and this part of the skin seems to possess very active absorbing, as well as exhaling powers, and is likewise more protected from the contact of the clothes, &c., so that the ointment is less easily wiped off and wasted. With regard to local detraction of blood where there is determination to the head, experience has taught me, that in no case ought we to apply leeches to the temples. This is a very important observation, and applies to the treatment of various cerebral affections, such as occur in fever apoplexy, paralysis, hydrocephalus, &c. Leeching the temples in such cases, not unfrequently aggravates the cerebral symptoms, whereas, if the leeches are applied behind the ear, or what is still better, along one side of the neck, this untoward event will be avoided. I say along one side of the neck, because we are thus enabled to promote the flow of blood where the leeches fall off, with less annoyance to the patient than if leeches had been applied at both sides. A most instructive monograph might be written on the application of cold to the head in various diseases; at present, much mischief frequently arises from practitioners being unacquainted with the different degrees of cold suitable to different states of the cerebral organ, and the different methods of conducting its application, so as to produce relief. In one case of fever, I saw violent mania immediately follow the injudicious application of ice to the head; and in another, much difficulty was experienced in saving the life of a young person, in whom a collapse of the system, without relief of the local affection, had been induced by the too copious and continued application of cold water to the head. Where very violent pain in the head occurs in fever, the *cold dashing* with water from a height, as recommended by Dr. Smith in his excellent treatise, is often a most valuable remedy, but in convulsive diseases, like that now described, this application is too violent; in such cases, the stream of water should be small, not poured from a height, and should be discontinued the moment the fit ceases, to be again renewed on the approach of another paroxysm. I am informed by an eminent practitioner of this city, that he twice witnessed fatal convulsions follow the injudicious use of cold affusion in mania. The efficacy of cold affusion in delirium tremens, in asphyxia, in cases of over-doses of prussic acid, &c., prove that it is too powerful an agent to be indiscriminately applied.

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* "No bronchitis or pectoral affection was present, and consequently the *tracheal râle* (rattles) was of the most ominous import."

The young gentleman, whose case occasioned the foregoing remarks, recovered in the course of a few weeks, and is now perfectly well."

A case of hydrophobia, where strychnine was unsuccessful; and one of traumatic tetanus, where tobacco was ineffectually employed, are related.

3. *Neuralgia of the Mammæ.* This was the case of an unmarried lady, who was of sanguineous, robust habit. The disease had lasted two years, with various degrees of violence.

"During the paroxysms, which often lasted several days, and sometimes considerably longer, the mammæ, which in this lady were full and large, became extremely painful and tender, but were neither tumefied, hard, or red. The intervals between the paroxysms were marked not only by a total cessation, but by a gradual diminution of pain. At no period had there been any spinal tenderness. One breast was not more affected than the other, and the axillary glands were not swollen. She had consulted several practitioners, had taken much medicine. and made use of many topical applications, without relief. Leeches had been repeatedly applied, but their bites had invariably caused excruciating pain, and the bleeding they occasioned was not followed by the least relief. I at first tried stupes, narcotic liniments, and plasters, with warm salt-water baths, but these measures were unattended by the least improvement. The absence of complete intermissions, and of well-marked paroxysms, prevented me, during several weeks, from perceiving the true neuralgic nature of this pain; at last this view of the subject occurred to me. I tried the carbonate of iron, with marked benefit. The disease has since frequently recurred, but its violence has always been lessened by the carbonate of iron. Sea bathing she likewise finds useful. I may here observe, that in those cases of neuralgia, in which carbonate of iron proves useful, I never find it necessary to raise the dose beyond one drachm, three times a day. Indeed a larger dose than half a drachm is seldom required. This statement of my experience, I consider necessary to counteract the impression made on the minds of students by a perusal of some of the London periodicals, where enormous doses of carbonate of iron are recommended, by no less an authority than the justly-celebrated Dr. Elliotson. I have examined this subject in a practical point of view with great attention, and think, that what is true concerning carbonate of iron, applies also to most tonic medicines. In fact we may consider it as a general rule, that tonics are rarely indicated, where moderate doses do not effect the desired purpose. This applies more particularly to the stronger tonics, such as the salts of iron, of arsenic, and quinine. I can scarcely conceive a case possible, in which a judicious physician will find it necessary for instance, to give more than ten grains of sulphate of quinine in a day, and yet much larger doses are not unusual here and elsewhere. Whenever the symptoms supposed to call for such a treatment, resist moderate doses of sulphate of quinine, we ought to pause, and reflect whether another plan of treatment ought to be adopted. There are two states of the system attended frequently with well-marked rigors, febrile paroxysms, and intermissions closely resembling ague; I mean internal suppuration, and local inflammation without suppuration. Practical physicians are fully aware of this circumstance, *but there is another condition of the system in which symptoms simulating ague arise, totally unconnected with inflammation*, and of which I have seen two remarkable examples. They both occurred in females. One, a lady of a nervous temperament, in about a fortnight after her confinement, was affected with well-marked symptoms of quotidian ague, which grew worse and more violent during the exhibition of very large doses of sulphate of quinine, but she rapidly got rid of her complaint when, at my suggestion, camphor, aromatic spirit of ammonia, &c., were substituted in its place. In another lady, symptoms of tertian, and afterwards of double tertian, had continued for many weeks, and had reduced the patient extremely, sulphate of quinine, arsenic, and opium, had successively received a fair trial, but in vain. The disease, however, finally yielded to the exhibition of diffusible stimulants, used in combination with *antacids*."

We quite agree with Dr. Graves, in his observations on the doses of tonics. We rarely find it necessary to give more than six or eight grains of sulphate of quinine, or three or four scruples of carbonate of iron in the day.

4. *External Application of Narcotics*. A lady consulted our author, in June, 1831, for severe headache, coming on at uncertain periods, continuing one or several days, with intense agony. She passed sleepless nights occasionally; yet her general health was not much deteriorated.

"Usually the pain comes on at a certain hour in the evening, continues during the night, and diminishes about the same hour in the forenoon, but at times the pain continues for several days without any appreciable intermission. As she is of a bilious habit, I attempted the cure in the first instance by emetics, followed by purgatives, and finally by tonics, but without producing the least benefit. Carbonate of iron, sulphate of quinine and arsenic, were successively tried in vain. At last being sent for to see her in one of the violent paroxysms, I directed the scalp to be well steeped, and a narcotic plaster to be afterwards applied. I should have mentioned, that the hair had been frequently shaved for the purpose of trying tepid shower-baths, and that she never complained of tenderness in any part of the head, or even the feeling of external soreness, the sensation of pain being constantly referred to an internal headach. These circumstances were very unpromising, so far as regarded the probability of her receiving relief from the external application of narcotics; and to tell the truth, when I ordered the plaster, I myself did not expect much advantage from its use; and yet, strange to say, this method proved most effectual, as the pain immediately disappeared, and did not return for seven weeks.

She wore the plaster for a month, and when the pain returned, a second plaster again banished it. The following is the formula for this plaster:—

℞. Opii pulv. ℈ij.
Camphoræ, ʒss.
Picis Burgund.
Emplast. Lythargyr. āā q. s.
ut ft Emplastrum.

The quantity of narcotic ingredients given in this formula, is sufficient for the largest-sized plaster, for smaller they must be proportionally diminished; such plasters are of great service in rheumatic and neuralgic pains of the chest, back, loins, and occasionally they prove useful in sciatica; in the advanced stages of phthisis, much suffering is frequently produced by stitches, soreness, and pains in the sides and chest; in such cases, I always direct the part to be well stuped, and then rubbed with warm laudanum; this will very often procure immediate relief, but if it does not, we must apply a few leeches, and favour the flow of blood by the application of a cupping-glass, occasionally a very small venesection is necessary, and the application of a small blister to the painful part. Those who have not been engaged in practice will perhaps expect directions to enable them to distinguish which of these modes of treatment is suited to any particular pain. The pain of *pleurodyne*, they will say, is to be treated in one way, and that of pleurisy in another: now in the advanced stages of phthisis, it so happens, that the pleuritic affection occupies so small a space in most cases, that it cannot, *à priori*, be detected by the usual means of percussion and auscultation, and consequently we must try the remedies I have mentioned in succession; indeed I have seen laudanum and anodyne plasters succeed, where others believed that severer applications would have been necessary. In *crick of the neck*, diligent friction with laudanum affords immediate relief."

Dr. Graves promises to continue these contributions to medical science; and we shall always be happy to diffuse them as far as our Journal circulates.

XXII.

CASE OF DISEASED HEART, ACCOMPANIED BY ANGINA PECTORIS, &c. By A. NEWTON, Esq.

[Dublin Journal, No. 2.]

THE subject of this case was a man, 34 years of age, of sallow complexion, and who had enjoyed health till within these eight years, when he became affected with palpitations, head-ache, throbbing in his ears. He was then in the habit of sitting up very late, and drinking largely of green tea. On leaving off this beverage and adopting regular hours, most of the above symptoms abated; but after a lapse of three years the palpitations became troublesome, accompanied by pain and oppression at the epigastrium, lasting for a few minutes at a time. Two more years passed away before these symptoms became particularly distressing; and then the palpitations were occasionally violent, especially when suddenly excited by any circumstance.

"At a subsequent period, I had several opportunities of witnessing those attacks; on their approach he stood up and threw back his shoulders, his face was covered with perspiration, and expressive of great agony, neither the pulse nor the respirations were altered in character or frequency. He said that the pain, which was very intense, commenced at the epigastrium, whence it advanced upwards along the chest, and down the arms, till it reached the ends of his fingers, and then gradually subsided. These attacks were frequently terminated by eructation. He said that these paroxysms were much milder than those which he had at night."

The following was the result of an examination made in October, 1830.

"At this time his countenance was sallow; his lips livid; there was no emaciation. On exposing his neck and chest, the entire of the anterior wall of the thorax was seen elevated by each stroke of the heart; there was also a strong epigastric pulsation; the carotid and subclavian arteries throbbed violently. On applying the stethoscope over the region of the heart, the head was elevated by each cardiac impulse. The pulsations were irregular and intermitting. A very loud *bruit de soufflet* was heard, resembling the sound produced by a spinning wheel whilst in rapid motion; this sound accompanied both the auricular and the ventricular contractions, it was more marked at the left, than at the right side, but was distinctly audible over the entire chest; the respiratory murmur was every where natural, but feeble, and marked by the *bruit*. On examining the carotid, by means of the stethoscope, a loud and very distinct *bruit* was heard, differing however in character from that which existed at the heart, it was accompanied by a strong impulse; this phenomenon was observable, not only in the carotid and large arteries, but even in their minute ramifications, thus it was very apparent even down to the ends of the fingers. His pulse was full, hard, and intermitting, 88 in the minute. On comparing the pulse at the wrist, with the pulsations at the heart, the interval between them was much more marked than in health; the frequency of the pulse was not altered by change of posture; his appetite was bad; his bowels confined, and he was much troubled by flatulence."

In consultation with Dr. Marsh, it was determined to try the hydro-sulphuret of ammonia, in the dose of ten drops twice a day, gradually increasing it to 35 drops. Under this treatment the action of the heart greatly subsided, and the pulse fell to 48 in the minute, becoming much softer, and less irregular. His general health improved.

In the course of a fortnight the medicine nauseated the stomach, and was therefore temporarily omitted. But he continued to take it more or less for two months, during which the attacks were much less frequent than before. The medicine was discontinued, and he remained in tolerably good health for three months. He now was less attentive to regimen, and the paroxysms returned. The medicine was again resumed—and again benefit was experienced. Mr. Newton lost sight of him till July, 1831, when he was seized with cholera; but soon recovered. He was now earning a precarious existence as a waiter at different hotels, and the cardiac paroxysms were troublesome and frequent. An attack of bronchitis succeeded, and was relieved; but he suddenly expired one night in a paroxysm of dyspnœa.

Dissection. "On opening the skull, a considerable quantity of transparent colourless serum was found at the base of the brain, and in the ventricles, the brain and its membranes were healthy.

Chest.—About a pint of straw coloured fluid was found in each pleura, and about four ounces in the pericardium, the left lung was united to the ribs by some old bands of adhesion, both lungs were œdematous, but did not present any other lesion. On opening the pericardium, the heart was found enormously increased in size, this enlargement was principally at the left ventricle, the parietes of which were very much thickened, the cavity was not much larger than natural, the right ventricle was dilated, and its parietes slightly hypertrophied, the auricles were healthy, no valvular disease could be detected either in the heart or arteries, there was a very slight atheromatous deposit in the aorta immediately beyond the semilunar valves. The arteries of the neck, chest, and abdomen, presented no lesion of structure.

There was some serous effusion in the peritoneum, the abdominal viscera were healthy."

Mr. Newton makes many acute and sensible remarks on this case. He justly observes, the *bruit* is not a certain sign of valvular disease, since it has often been perceived where no organic change could be detected. Our own impression is that it is sometimes produced by mere strong action of the heart, and is the result of the mechanical friction of the current of blood through the orifices of the organ and along the arteries. How else can we account for the *bruit* in the carotid, or other arteries? Still we agree with our author that a permanent *bruit*, especially when combined with other anormal cardiac symptoms, is a pretty sure indication of organic disease. The following remarks are worthy of attention.

"Whilst upon the subject of diet, it may be mentioned, that every thing calculated to produce flatulence must be strictly prohibited, as this is a most troublesome and constant complication in cardiac disease.

Many objections apply to the treatment by digitalis; it is always a dangerous and often an uncertain remedy, and even in these cases in which it succeeds best, it soon loses its efficacy; its tendency to disorder the stomach is often such as to forbid its employment, it was therefore a great desideratum in medicine, to devise some plan of treatment which would lower the circulating system without producing permanent debility. Judging from the accounts which Cruickshanks and Rollo have given of the effects of hydrosulphuret of ammonia, it appeared to Dr. Marsh and me, that it might be advantageous in this case, particularly, as here, the angina seemed to depend upon organic disease of the heart; I tried it, and the event far surpassed our most sanguine expectations. Whilst the patient was upon meat diet and attending to his occupations, the action of the heart was lowered; the paroxysms of angina diminished in frequency, severity, and duration, and for a time were completely suspended; his general health also improved, and I may remark here, that his appetite instead of being destroyed, as is stated by Cruickshanks and Rollo to be the effect of this remedy, was, on the contrary, increased."

Mr. N. informs us that Dr. Marsh and himself have tried the hydrosulphuret of ammonia in various diseases, chiefly cardiac and cutaneous; in all of which it had a powerful effect in lowering the pulse, increasing the appetite, and promoting the secretion of urine. It is apt to be decomposed, and should be used fresh, and in drops rather than in draughts or mixtures.

XXIII.

DR. FERGUSSON ON CONTAGION.*

WE regret that we are unable to give a detailed account of this very able paper, though that regret is much lessened by a knowledge of the wide circulation which Dr. Fergusson's paper has attained through the medium of our highly respected contemporary. We cannot, however, pass over the paper without paying our respects to a physician of great experience and accurate observation, who has dedicated much of his time and talents to the investigation of diseases—and especially of their causes, whether in human or in marsh emanations. The following extract will convey some idea of our ingenious and practical author's mode of reasoning.

"I assume, then, for reasons which I shall now farther illustrate, that endemic typhous fever is not essentially an infectious disease; that it may be approached at all times with impunity under ordinary circumstances of ventilation and personal purity; and that where those are observed, it cannot be carried or transported by any sick, however ill, so as to affect others in a different locality. To say that it has often spread to other inhabitants of the same locality or dwelling even, if it be incapable of transportation, does not constitute a contagion. It only amounts to a disease of locality, very frequently remittent or catarrhal fever, sublimed into *typhous* through neglect or improper treatment; and even should it infect visitors who choose to place themselves within its influence,—upon the same ground, that would be no proof of contagion, unless those visitors could also carry the infection so as to communicate it to others upon different ground at a distance; for to talk of contagion limited to one spot, is surely only saying that the spot of ground, and not the person of the patient, must be the source of the disease.

In this transportability resides the very touchstone and answer to the question of contagion. To suppose that a patient, infectious in his person, can only give out disease in a particular atmosphere and place, would be like what we have all read in the early lessons of our childhood, where an individual performs a prodigious leap in the island of Rhodes, but could not possibly be made to do it anywhere else. With equal justice may we assert that our contagious *exanthemata* can only become diffusible under similar circumstances, or that the infections of *syphilis* and *scabies* are influenced by the laws of atmosphere and locality. In regard to *variola*, the chief of those *exanthemata*, we may with more reason draw the direct contrary inference; for, previously to the discovery of the vaccine preventive, it used to be during the finest weather of the season that our babes, when carried out in arms, were struck and blighted by the disease, from passing even momentarily to leeward of an infected subject. Nor is it unreasonable to believe, that the very purity of the atmosphere actually contributed to the efficacy and surety of the infection; since then the contagion would be less adulterated and dilated with moisture, or other extraneous matter. No one would so dilute and obtund the actual variolous fluid (if a fluid) before proceeding to inoculation; and the contagious vapour can be nothing else than the same material under a gaseous form.

That other form of typhous fever which I may call factitious, (as being created by ourselves out of causes over which we ought to have exerted due control,) to distinguish it from the endemic, which we cannot prevent, must also be contagious under the same circumstances. Here, however, I believe, in like manner, that the person of the patient, independent of *fomites*, never gives out at any one time a sufficiency of the typhoid poison to affect another healthy person; that the poison can only be made effective through contamination of atmosphere, under long-continued accumulation of morbific effluvia; and in fine, that the atmosphere of the patient is infectious, and not his person, which, if once cleaned and purified, and ventilation restored, may be approached, however ill he may be, with perfect impunity. In this belief I feel warranted, from the knowledge of several important facts, of a character so general as to warrant the greatest confidence in their application. 1*st*, The Bristol Hospital, for a great many years, has received typhous fevers into their well-disciplined wards, without having ever spread the disease even to the most contiguous beds. 2*d*, Several of the great hospitals in London have followed the same example with the same results. 3*d*, The most pestilentially dangerous fevers to approach when single, in the confined dwellings of the poor, have almost everywhere been found devoid of every infectious principle when collected together in numbers, and confined by the hundred within the walls of a well-regulated fever hospital. Upon this point the question of contagion must turn; for, if the evidence here given be not impugned, it will be impossible in human testimony to adduce anything more decisive and conclusive. Reasoning from single individual instances will generally deceive; but well-digested impartial observation upon masses of men can never lead to an erroneous conclusion.

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* Notes and Observations on the Contagion of Typhous Fever and Contagion generally. By W. Fergusson, M.D. (Corrected from the Edin. Med. and Surg. Journ.)

While I thus, however, express my conviction of typhous fever never being a true essential contagion under any type, I must allow the question to be in some degree open to discussion, in regard to that (type) form which has an animal origin, and may justly be called an animal poison. The evidence of the great hospitals just alluded to would imply a negative; but it remains to be proved whether that belief may not have been founded upon the evidence of endemic typhus only, without experience of the other form of the disease. Thanks to our improved prison-discipline, such cases must now be rare. But when they existed in former times, the Black Assizes at Oxford, the Old Bailey Sessions, and other Sessions in Ireland and elsewhere, recorded in the different medical journals, would give fearful proof of its dreadful powers. I acknowledge, too, that the infection of hospital gangrene is a transportable and inoculable contagion, as applied to other ulcers, and that puerperal fever, another local modification of typhus, may be carried from house to house in any locality. With regard to the jail fever above alluded to, however, my own belief leads me to the conclusion, that the contagion resided in the woollen clothing of the prisoners in the dock, from whence it is stated that a stream of air from an open window blew directly upon the court; and that, had they been furnished with fresh clothing, and their bodies purified before being placed there, the closest proximity or actual contact would have produced no disease whatever.

This belief I ground on the fact, that woollen covering of any kind is as open and as prone to absorb, as it is tenacious to hold in accumulation, every species of animal exhalation; and the records of our press-gangs and prisons will show, that men would, in those days, be introduced into our fleet and armies, who for months together had never once had their clothing changed by night or by day; and this leads to another consideration of mighty import in the history and consideration of disease; for it would seem that these men had not themselves at the time the dreadful distemper, which they communicated with such fatal effect to the Court that tried them. That they had it not at the time I can fully credit; but that they were about to fall into it, and that, too, under its worst form, may be fairly presumed.

This proposition is not paradoxical; for it has been verified, and may be seen every autumn in all the aguish districts of our own country, that the actual inhabitant of the swamp itself, immersed night and day in a sea of malaria, is never so liable to fall under its influence as his neighbour on the dry rocky brow of the hill immediately above the marsh; thereby proving that the continuous application of a morbific power from without so deadens the nervous energy, that it becomes incapable of assuming the reaction and resistance which would be necessary to throw it off, under the form which nature has decreed of acute disease. The release from the deeply infected cells of a prison to the pure open air, would seem to restore this power to the prisoner, in the same way that the inhabitant of the hill, in a swampy country, from breathing alternately the wholesome air of Heaven, with the noxious vapours from below, always retains it, and leads the superficial observer to the fallacious conclusion of dry rocky ground being more pestiferous than the bed of the fen itself. But how different is the true state of the case. The dweller in the locality below may, it is true, exhibit no acute disease, but every organ is disordered ;—he has no health in any way, and is certainly destined to an early grave ; while the other, although he may have imbibed the poison in its fullest dose, still possesses the power to throw it off, by an effort of his constitution, however dangerous and painful. He may, through such an ordeal, be restored to pristine health and vigour. With his benumbed neighbour, unless he removes from the marsh, it is impossible. He has been struck to the vitals, and must succumb to his fate. This is not imaginary, nor am I speaking of what I have not seen and examined. In many of the malarious districts of Spain, old age, among the resident inhabitants, was unknown. On the marshy banks of the great Guiana rivers, and in the central districts of Trinidad, presenting as concentrated a body of swamp as any in the world, our soldiers died by hundreds, blighted and withered, without ever showing a paroxysm of fever ; and it is even recorded by Dr. Gregory of Edinburgh, in his lectures, that in a most unwholesome locality of the Southern United States of America, of which, at the distance of 40 years, I now forget the name, no native inhabitant constantly residing, ever attained the age of 21 years. I have been led into this digression from my desire to prove the possibility of the most intense existence of a cause, without a visible symbol of effect, as in the case of the prisoners of the Old Bailey, and the inhabitants of a deeply malarious county."

We recommend a perusal of the whole paper, in our respected cotemporary, to all our readers.

XXVI.

OCULAR AND ACOUSTIC ILLUSIONS AND EXPERIMENTS.

IT is a distinguishing and a gratifying feature of the extraordinary epoch in which we live, that men of great talent, great learning, and great reputation, are employed in writing for the instruction and entertainment of youth. In former ages great men wrote for the great, learned for the learned. Petrarch founded his hopes of immortality on his Latin compositions, yet those cherished works are mouldering in libraries, whilst his sonnets, composed in his despised native language, are the admiration of the world, and have obtained for him eternal renown. In those days, we say, the learned constituted a sort of separate fraternity, with masonic signs and a jargon of their own. They despised the mass of mankind, and esteemed it little short of desecration to labour for the enlightenment of the vulgar. Every period of existence, national and individual, has its peculiar wants. In the present state of civilization those wants are highly intellectual, the press has produced them, and the press only can satisfy them. In proportion as reading has become more general, it has also become more pure, and the class that in the year 1820 was delighted and contented with the trash of the Minerva Press, with ridiculous legends and supernatural romances, turns from them now with contempt and disgust, and seeks for productions fraught with more rational amusement and more wholesome information. When we look around us at the little world in our own island, and contemplate the progress of education, we cannot but feel how true was the exclamation that a little knowledge is a dangerous thing! A little knowledge is indeed dangerous, but it is infinitely better than none, because it *must* stimulate its possessor to acquire more. Children walk before they run, and the human mind has had its stages of infancy and debility precursory to vigour.

It is a maxim of commercial polity that the supply will be regulated by the demand, and the same holds with the traffic of the mind. In the æra of novels and romances the persons who ministered to the public appetite were mostly such as were unfit for the higher walks of literature. But as soon as a better taste was become diffused in the community, a few men of character and reputation felt that they would lose neither by embarking in the production of popular works. The example once given by a few has been followed by many, and the community having good books and bad placed before them, have shewn that they possess the sense of discriminating worth and of patronizing merit. This improvement has not been slow and gradual, it has almost been made by a bound, and probably there are few persons who would have ventured to predict even ten years ago that Sir Walter Scott would be writing history for his grandchildren—Sir David Brewster letters on natural magic for young people—or that a great society, composed of men distinguished by rank, and, what is better, of others renowned for their attainments, should be publishing sixpenny pamphlets for artisans, and establishing a penny magazine for all classes. The great experiment of educating every man is commenced in this country. What will be the result no one can say, but we do not doubt that it will be good. Knowledge is not only power, but in the gross it is virtue, enhances every good feeling, tends to moderate almost every bad. It is a wonderful sight to see the unwashed artificer speaking at public meetings, writing in periodical publications, acquainted with the policy of his own government, taking a deep interest in the situation of foreign nations, and discussing commercial and financial questions with as much good sense, in equal if not superior language, though not with quite so aristocratic a tone, as many a member of St. Stephen's chapel.

These remarks may seem misplaced in a medical journal, but we think that the connexion between the profession and the public is too close to admit of a separation of interest or destiny. If the intelligence of the age proceeds, the acquirements of medical men must correspond with it. Our profession has always been considered learned, but the standard measure of learning is undergoing material alterations, and the kind and quantity that sufficed in former times will not be adapted to the future. We do not hesitate to say, that the profession has sunk in public estimation, that it is sinking, and that it promises to sink yet farther. The *Times* newspaper is a good index of public opinion, it is, algebraically speaking, the exponent of its value. What did that newspaper observe in reference to the late lunatic inquisition on Miss Bagster? It stated that every trial in which medical men were interrogated as witnesses put the friends of the profession to the blush, and exposed the miserable system of education which could lead to such disgraceful exhibitions of inconsequential reasoning and shallow information. The *Times* is right. It is too melancholy to look on the profession, and see how it lags in the march of knowledge. The education of medical men in the mass is decidedly bad both in principle and in detail. It would be mischievous had it no sin but this, that it is a heterogeneous, patch-work thing, a congeries of pieces scarcely stitched together, and not a consistent whole. There is a mode of education for the apothecary, and a mode of education for the licentiate apothecary, and one for the surgeon, and one for the fellow of the College of Physicians, or rather the College of Fellows, and one for the licentiate of that College, and one—no, there is none for the physician-accoucheur. The sages who devised this precious compound of the exuviæ and excrementitious remains of the ancient and reputable corporation of barbers, and institution of that enlightened liberal, the eighth Henry, appear to have exercised the little wits they had in devising the minimum of knowledge necessary for apothecary, surgeon, or doctor to receive a license to practise their "mysterie and cunnynge"—and apothecary, surgeon, and doctor would seem to have seconded their laudable endeavour by ascertaining the minimum of study necessary to obtain that license. What with the corporations on one hand and human nature on the other, the medical profession is as we see it, distracted in itself, weak in its head, weak in its tail, with no unity of interest, no consent of action, flouted by lawyers, laughed at, pitied, and consulted by the public, despised by the press.

Let it not be imagined then that the great intellectual pursuits of the community, are rather matters of curiosity than of immediate importance to the members of the profession. We essentially belong to the community, grow with its growth, and decline with its decline; our honour is its opinion, our rank is its award. That honour and rank are not supported by prescriptive rights, nor heraldic blazonry; and when the world has begun to think meanly of us we are in fact degraded. The means of recovering the position which we certainly have lost should form the subject of serious consideration, of a cautious and deliberate attempt to accommodate our own internal constitution to the wants and wishes of the age, and to shake from us the incubus which the barbarous ideas of former generations have planted on our bosoms. We say that this should be the subject of anxious investigation, and we do not doubt that it will be so. Men's minds have of late been absorbed in the general contest between civilization and despotism, varied in its characters in different nations. In our own country the ideas of the age have obtained a signal triumph, and probably a new æra has dawned on our legislature. After such a mighty revolution achieved by the force of public opinion, it is idle to suppose that corporate bodies can successfully brave it. Sooner or later they will fall, consumed by the light of growing intelligence. If wisely disposed to suit themselves to circumstances, they may yet survive with an infusion of fresh and healthful vigour into their veins; but if not, they may be assured that we are no mendacious prophets when we foretel their inevitable destruction. The time is arriving when this discussion will be taken up, and when it is begun in earnest it will not be hastily abandoned.

These reflections were excited by a perusal of Sir David Brewster's Letters on Natural Magic, in the Family Library. We do not hesitate to say that every professional man should read the volume, and he will share in the advantages derived from its study by the rising generation, for which this Library has been professedly composed. We do not intend to give a formal account of the present work, but merely to select some portions containing curious facts or ingenious explanations in reference to what we may call the physiological department of magic.

I. OCULAR ILLUSIONS.

Sir David Brewster, after informing his readers that the part of the eye corresponding to the penetration of the sclerotica by the optic nerve is insensible to light, proceeds to describe another illusion of the eye that presented itself to him several years ago.

"When the eye is steadily occupied in viewing any particular object, or when it takes a fixed direction while the mind is occupied with any engrossing topic of speculation or of grief, it suddenly loses sight of, or becomes blind to, objects seen indirectly, or upon which it is not fully directed. This takes place whether we use one or both eyes, and the object which disappears will reappear without any change in the position of the eye, while other objects will vanish and revive in succession without any apparent cause. If a sportsman, for example, is watching with intense interest the motions of one of his dogs, his companion, though seen with perfect clearness by indirect vision, will vanish, and the light of the heath or of the sky will close in upon the spot which he occupied.

In order to witness this illusion, put a little bit of white paper on a green cloth, and within three or four inches of it, place a narrow strip of white paper. At the distance of twelve or eighteen inches, fix one eye steadily upon the little bit of white paper, and in a short time a part or even the whole of the strip of paper will vanish as if it had been removed from the green cloth. It will again reappear, and again vanish, the effect depending greatly on the steadiness with which the eye is kept fixed. This illusion takes place when both the eyes are open, though it is easier to observe it when one of them is closed. The same thing happens when the object is luminous. When a candle is thus seen by indirect vision, it never wholly disappears, but it spreads itself out into a cloudy mass, the centre of which is blue, encircled with a bright ring of yellow light.

This inability of the eye to preserve a sustained vision of objects seen obliquely, is curiously compensated by the greater sensibility of those parts of the eye that have this defect. The eye has the power of seeing objects with perfect distinctness, only when it is directed straight upon them; that is, all objects seen indirectly are seen indistinctly; but it is a curious circumstance, that when we wish to obtain a sight of a very faint star, such as one of the satellites of Saturn, we can see it most distinctly *by looking away from it*, and when the eye is turned full upon it, it immediately disappears."

Sir D. B. observes that the most efficacious illusion probably arises from the difficulty with which objects are seen, when illuminated by a small degree of light. The eye becomes fixed very steadily upon them, the exertion throws it into a state of painful agitation, the object swells and contracts and partly disappears, and will again become visible when the eye has recovered from the delirium into which it was thrown. Let time and place and circumstance be favorable, and it is not difficult to conceive that strong minded persons, much more the credulous and timid, may be deceived by this physical illusion into the belief that the distorted spectrum before them is actually some disembodied sprite, or unearthly messenger. As Sir David shrewdly hints, it is remarkable that spectres are mostly seen by the young and the ignorant at night, and that they are always *white*, the only colour which, under such cicumstances, could be seen. The observations of Sir David Brewster on what he terms the phosphorescence of the retina are also deserving of attention.

"Another class of ocular deceptions have their origin in a property of the eye which has been very imperfectly examined. The fine nervous fabric which constitutes the retina, and which extends to the brain, has the singular property of being *phosphorescent by pressure*. When we press the eye-ball outwards by applying the point of the finger between it and the nose, a circle of light will be seen, which Sir Isaac Newton describes as 'a circle of colours like those in the feather of a peacock's tail.' He adds, that 'if the eye and the finger remain quiet, these colours vanish in a second of time, but if the finger be moved with a quavering motion they appear again.' In the numerous observations which I have made on these luminous circles, I have never been able to observe any colour but white, with the exception of a general red tinge which is seen when the eyelids are closed, and which is produced by the light which passes through them. The luminous circles too always continue while the pressure is applied, and they may be produced as readily after the eye has been long in darkness as when it has been recently exposed to light. When the pressure is very gently applied, so as to compress the fine pulpy substance of the retina, light is immediately created when the eye is in total darkness; and when in this state light is allowed to fall upon it, the part compressed is more sensible to light than any other part, and consequently appears more luminous. If we increase the pressure, the eye-ball, being filled with incompressible fluids, will protrude all round the point of pressure, and consequently the retina at the protruded part will be *compressed* by the outward pressure of the contained fluid, while the retina on each side, namely, under the point of pressure and beyond the protruded part, will be drawn towards the protruded part or *dilated*. Hence the part under the finger which was originally compressed is now *dilated*, the adjacent parts *compressed*, and the more remote parts immediately without this *dilated* also. Now we have observed, that when the eye is, under these circumstances, exposed to light, there is a bright luminous circle shading off externally and internally into total darkness. We are led therefore to the important conclusions, that when the retina is compressed in total darkness it gives out light; that when it is compressed when exposed to light, its sensibility to light is increased; and that when it is *dilated under exposure to light, it becomes absolutely blind, or insensible to all luminous impressions.*"

Whether this conclusion of Sir David's be positively true or not we do not feel qualified to decide, not having made sufficient experiments relative to the point in question. In headache attended with derangement of the stomach this phosphorescence of the retina assumes a new shape. When the eye is in total darkness, a faint blue light floats before it, varying in its shape, and passing away at one side. This blue light increases in intensity, becomes green and then yellow and sometimes rises to red; all these colours being frequently seen at once, or the mass of light shades off into darkness.

To the phenomena called ocular spectra, or accidental colours, we need not advert, as many of our readers are no doubt acquainted with their general characters. But these accidental spectra are occasionally very disagreable. Mr. Boyle, in his book of colours, mentions an individual who continued for years to see the spectre of the sun when he looked upon bright objects. Mr. Locke being struck with the fact applied to Sir Isaac Newton for an explanation of it, which elicited the following curious narrative of a similar circumstance that happened to himself.

"The observation you mention in Mr. Boyle's book of colours, I once made upon myself with the hazard of my eyes. The manner was this: I looked a very little while upon the sun in the looking-glass with my right eye, and then turned my eyes into a dark corner of my chamber, and winked, to observe the impression made, and the circles of colours which encompassed it, and how they decayed by degrees, and at last vanished. This I repeated a second and a third time. At the third time, when the phantasm of light and colours about it were almost vanished, intending my fancy upon them to see their last appearance, I found, to my amazement, that they began to return, and by little and little to become as lively and vivid as when I had newly looked upon the sun. But when I ceased to intend my fancy upon them they vanished again. After this, I found, that, as often as I went into the dark, and intended my mind upon them, as when a man looks earnestly to see any thing which is difficult to be seen, I could make the phantasm return without looking any more upon the sun; and the oftener I made it return, the more easily I could make it return again. And at length, by repeating this without looking any more upon the sun, I made such an impression on my eye, that, if I looked upon the clouds, or a book, or any bright object, I saw upon it a round bright spot of light like the sun, and, which is still stranger, though I looked upon the sun with my right eye only, and not with my left, yet my fancy began to make an impression upon my left eye as well as upon my right. For if I shut my right eye, and looked upon a book or the clouds with my left eye, I could see the spectrum of the sun almost as plain as with my right eye, if I did but intend my fancy a little while upon it; for at first, if I shut my right eye, and looked with my left, the spectrum of the sun did not appear till I intended my fancy upon it; but by repeating, this appeared every time more easily. And now in a few hours time I had brought my eyes to such a pass, that I could look upon no bright object with either eye but I saw the sun before me, so that I durst neither write nor read; but to recover the use of my eyes, shut myself up in my chamber made dark, for three days together, and used all means in my power to direct my imagination from the sun. For if I thought upon him, I presently saw his picture, though I was in the dark. But by keeping in the dark, and employing my mind about other things, I began in three or four days to have more use of my eyes again; and by forbearing to look upon bright objects, recovered them pretty well; though not so well but that, for some months after, the spectrums of the sun began to return as often as I began to meditate upon the phenomena, even though I lay in bed at midnight with my curtains drawn. But now I have been very well for many years, though I am apt to think, if I durst venture my eyes, I could still make the phantasm return by the power of my fancy. This story I tell you, to let you understand, that in the observation related by Mr. Boyle, the man's fancy probably concurred with the impression made by the sun's light to produce that phantasm of the sun which he constantly saw in bright objects."

Passing over some other matters we may pause for a minute to consider the occasional insensibility of the eye to particular colours, unaccompanied by other imperfection of vision, or derangement of health. The case of Harris the shoemaker at Maryport, related by Mr. Huddart, is familiar to most medical readers; he was capable of recognizing only the two opposite colours of *black* and *white*. Mr. Scott in describing his own case in the Philosophical Transactions stated that he did not know any *green*—that a *pink* and a *pale blue* were alike to him—that he often thought a *full red* and a *full green* a good match—that he sometimes could not distinguish a *full purple* from a *deep blue*, but that he knew light, dark, and middle *yellows*, and all degrees of *blue* except *sky blue*. This gentleman was angry, because on the occasion of his daughter's marriage, the bridegroom, "a gentleman of the law, in a fine rich claret-coloured dress," appeared to him to come in black. The lady, however, had better vision, and liking the colour, which she said "was very genteel," the ceremony was not interrupted in consequence. Mr. Scott's father, his maternal uncle, one of his sisters, and her two sons, had all the same imperfection. Dr. Nicholl recorded a case where a naval officer purchased a *blue* uniform coat and waistcoat with *red* breeches to match the blue, and Mr. Harvey describes the case of a tailor at Plymouth, who on one occasion repaired an article of dress with *crimson* in place of *black* silk, and on another patched the elbow of a *blue* coat with a piece of *crimson* cloth.

"It deserves to be remarked that our celebrated countrymen the late Mr. Dugald Stewart, Mr. Dalton, and Mr. Troughton, have a similar difficulty in distinguishing colours. Mr. Stewart discovered this defect when one of his family was admiring the beauty of the Siberian crab-apple, which he could not distinguish from the leaves but by its form and size. Mr. Dalton cannot distinguish *blue* from pink, and the solar spectrum consists only of two colours, *yellow* and *blue*. Mr. Troughton regards *red*, *ruddy pinks* and brilliant *oranges*, as *yellows*, and *greens* as *blues*, so that he is capable only of appreciating *blue* and *yellow* colours.

In all those cases which have been carefully studied, at least in three of them in which I have had the advantage of making personal observations, namely, those of Mr. Troughton, Mr. Dalton, and Mr. Liston, the eye is capable of seeing the whole of the prismatic spectrum, the red space appearing to be yellow. If the red space consisted of homogeneous or simple red rays, we should be led to infer that the eyes in question were not insensible to red light, but were merely incapable of discriminating between the impressions of red and yellow light. I have lately shown, however, that the prismatic spectrum consists of three equal and coincident spectra of *red*, *yellow*, and *blue* light, and consequently, that much yellow and a small portion of blue light exist in the red space;—and hence it follows, that those eyes which see only two colours, viz. *yellow* and *blue*, in the spectrum, are rarely insensible to red light of the spectrum, and see only the yellow with the small portion of blue with which the red is mixed. The faintness of the yellow light which is thus seen in the the red space, confirms the opinion that the retina has not appreciated the influence of the simple red rays."

Sir David relates a very curious accident which happened to himself, and might possibly happen in some degree to others.

"In the course of writing the preceding observations, an ocular illusion occurred to myself of so extraordinary nature, that I am convinced it never was seen before, and I think it far from probable that it will ever be seen again. Upon directing my eyes to the candles that were standing before me, I was surprised to observe, apparently among my hair, and nearly straight above my head, and far without the range of vision, a distinct image of one of the candles inclined about 45° to the horizon, as shown at A in Fig. 2. The image was as distinct and perfect as if it had been formed by reflexion from a piece of mirror glass, though of course much less brilliant, and the position of the image proved that it must be formed by reflexion from a perfectly flat and highly polished surface. But where such a surface could be placed, and how, even if it were fixed, it could reflect the image of the candle up through my head, were difficulties not a little perplexing. Thinking that it might be something lodged in the eyebrow, I covered it up from the light, but the image still retained its place. I then examined the eyelashes with as little success, and was driven to the extreme supposition that a crystallization was taking place in some part of the aqueous humour of the eye, and that the image was formed by the reflexion of the light of the candle from one of the crystalline faces. In this state of uncertainty, and, I may add, of anxiety, for this last supposition was by no means an agreeable one, I set myself down to examine the phenomenon experimentally. I found that the image varied its place by the motion of the head and of the eyeball, which proved that it was either attached to the eyeball or occupied a place where it was affected by that motion. Upon inclining the candle at different angles the image suffered corresponding variations of position. In order to determine the exact place of the reflecting substance, I now took an opaque circular body and held it between the eye and the candle till it eclipsed the mysterious image. By bringing the body nearer and nearer the eyeball till its shadow became sufficiently distinct to be seen, it was easy to determine the locality of the reflector, because the shadow of the opaque body must fall upon it whenever the image of the candle was eclipsed. In this way I ascertained that the reflecting body was in the upper eyelash, and I found, that, in consequence of being disturbed, it had twice changed its inclination, so as to represent a vertical candle in the horizontal position B, and afterwards in the inverted position C. Still, however, I sought for it in vain, and even with the aid of a magnifier I could not discover it. At last, however, Mrs. B. who possesses the perfect vision of short-sighted persons, discovered, after repeated examinations, between two eyelashes, a minute speck, which, upon being removed with great difficulty, turned out to be a chip of red wax not above the hundredth part of an inch in diameter, and having its surface so perfectly flat and so highly polished that I could see in it the same image of the candle, by placing it extremely near the eye. This chip of wax had no doubt received its flatness and its polish from the surface of a seal, and had started into my eye when breaking the seal of a letter."

The third letter is occupied with the consideration of those spectral illusions, or apparitions, which, as in Nicolai's celebrated case, may be occasioned by derangement of the health, or, as in the thousand and one *authenticated* ghost-stories, by the influence of imagination, fear, remorse, or superstition. Sir David communicates to the world the case of Mrs. A. resembling in some respects that of Nicolai. In Mrs. A. however, there appears to exist a more excitable temperament, and a susceptibility of nervous system which did not exist in the bookseller of Berlin, circumstances which detract in some measure from the surprise which the singular illusions would otherwise create in us. Mrs. A. too had been studying Dr. Hibbert's Philosophy of Apparitions, in which Nicolai's case is related: and Sir Walter Scott's Letters on Demonology. As this is a course of reading, not usually followed by ladies, it appears to us to prove two things:—first that Mrs. A. must have had something like an original disposition towards the supernatural; and secondly that disposition would in all probability have been increased by the perusal of works like those of Dr. Hibbert and Sir Walter Scott. All these circumstances should be looked to in endeavouring to account for the illusions to which Mrs. A. became and still is subject, and with such a state of mind we need not be surprised that corporeal derangement has not been so manifest in her as in Nicolai. As a specimen of the spectra which presented themselves to Mrs. A. we subjoin the following.

"On the 17th of March, Mrs. A. was preparing for bed. She had dismissed her maid, and was sitting with her feet in hot water. Having an excellent memory, she had been thinking upon and repeating to herself a striking passage in the Edinburgh Review, when, on raising her eyes, she saw seated in a large easy chair before her the figure of a deceased friend, the sister of Mr. A. The figure was dressed, as had been usual with her, with great neatness, but in a gown of a peculiar kind, such as Mrs. A. had never seen her wear, but exactly such as had been described to her by a common friend as having been worn by Mr. A.'s sister during her last visit to England. Mrs. A. paid particular attention to the dress, air, and appearance of the figure, which sat in an easy attitude in the chair, holding a handkerchief in one hand. Mrs. A. tried to speak to it, but experienced a difficulty in doing so, and in about three minutes the figure disappeared. About a minute afterwards, Mr. A. came into the room, and found Mrs. A. slightly nervous, but fully aware of the delusive nature of the apparition. She described it as having all the vivid colouring and apparent reality of life; and for some hours preceding this and other visions, she experienced a peculiar sensation in her eyes, which seemed to be relieved when the vision had ceased."

It appears from a consideration of the whole of this interesting case that Mrs. A. is a person, who, if uneducated and placed under favourable circumstances, would not only have seen but believed in apparitions. Having studied the philosophy of the subject, her mind is sufficiently strengthened to perceive that the whole are but 'airy nothings', whilst her temperament continues sufficiently excitable to conjure them up from the regions of imagination, and to convert the forms abiding in her memory into illusive objects of the sense.

The following observations of Sir David Brewster are sufficiently interesting to merit extraction, being insusceptible of useful abbreviation.

"In his admirable work on this subject, Dr. Hibbert has shown that spectral apparitions are nothing more than ideas or the recollected images of the mind, which in certain states of bodily indisposition have been rendered more vivid than actual impressions, or, to use other words, that the pictures in the 'mind's eye' are more vivid than the pictures in the body's eye. This principle has been placed by Dr. Hibbert beyond the reach of doubt; but I propose to go much farther, and to show that the 'mind's eye' is actually the body's eye, and that the retina is the common tablet on which both classes of impressions are painted, and by means of which they receive their visual existence according to the same optical laws. Nor is this true merely in the case of spectral illusions: It holds good of all ideas recalled by the memory or created by the imagination, and may be regarded as a fundamental law in the science of pneumatology.

It would be out of place in a work like this to adduce the experimental evidence on which it rests, or even to explain the manner in which the experiments themselves must be conducted; but I may state in general, that the spectres conjured up by the memory or the fancy have always a 'local habitation,' and that they appear in front of the eye, and partake in its movements exactly like the impressions of luminous objects after the objects themselves are withdrawn.

In the healthy state of the mind and body, the relative intensity of these two classes of impressions on the retina are nicely adjusted. The mental pictures are transient and comparatively feeble, and in ordinary temperaments are never capable of disturbing or effacing the direct images of visible objects. The affairs of life could not be carried on if the memory were to intrude bright representations of the past into the domestic scene, or scatter them over the external landscape. The two opposite impressions, indeed, could not co-exist: The same nervous fibre which is carrying from the brain to the retina the figures of memory, could not at the same instant be carrying back the impressions of external objects from the retina to the brain. The mind cannot perform two different functions at the same instant, and the direction of its attention to one of the two classes of impressions necessarily produce the extinction of the other: But so rapid is the exercise of mental power, that the alternate appearance and disappearance of the two contending impressions is no more recognized than the successive observations of external objects during the twinkling of the eyelids. If we look, for example, at the Façade of St. Paul's, and, without changing our position, call to mind the celebrated view of Mont Blanc from Lyons, the picture of the cathedral, though actually impressed upon the retina, is momentarily lost sight of by the mind, exactly like an object seen by indirect vision; and during the instant the recollected image of the mountain, towering over the subjacent range, is distinctly seen, but in a tone of subdued colouring, and indistinct outline. When the purpose of its recal is answered, it quickly disappears, and the picture of the cathedral again resumes the ascendancy.

In darkness and solitude, when external objects no longer interfere with the pictures of the mind, they become more vivid and distinct; and in the state between waking and sleeping, the intensity of the impressions approaches to that of visible objects. With persons of studious habits, who are much occupied with the operations of their own minds, the mental pictures are much more distinct than in ordinary persons; and in the midst of abstract thought, external objects even cease to make any impression on the retina. A philosopher absorbed in his contemplations experiences a temporary privation of the use of his senses. His children or his servants will enter the room directly before his eyes without being seen. They will speak to him without being heard; and they will even try to rouse him from his reverie without being felt; although his eyes, his ears, and his nerves, actually receive the impressions of light, sound, and touch. In such cases, however, the philosopher is voluntarily pursuing a train of thought on which his mind is deeply interested; but even ordinary men, not much addicted to speculations of any kind, often perceive in their mind's eye the pictures of deceased or absent friends, or even ludicrous creations of fancy, which have no connexion whatever with the train of their thoughts. Like spectral apparitions they are entirely involuntary, and though they may have sprung from a regular series of associations, yet it is frequently impossible to discover a single link in the chain.

If it be true, then, that the pictures of the mind and spectral illusions are equally impressions upon the retina, the latter will differ in no respect from the former, but in the degree of vividness with which they are seen; and those frightful apparitions become nothing more than our ordinary ideas, rendered more brilliant by some accidental and temporary derangement of the vital fuuctions. Their very vividness too, which is their only characteristic, is capable of explanation. I have already shown that the retina is rendered more sensible to light by voluntary local pressure, as well as by the involuntary pressure of the bloodvessels behind it; and if, by looking at the sun, we impress upon the retina a coloured image of that luminary, which is seen even when the eye is shut, we may by pressure alter the colour of that image, in consequence of having increased the sensibility of that part of the retina on which it is impressed. Hence we may readily understand how the vividness of the mental pictures must be increased by analogous causes.

In the case both of Nicolai and Mrs. A. the immediate cause of the spectres was a deranged action of the stomach When such a derangement is induced by poison, or by substances which act as poisons, the retina is peculiarly affected, and the phenomena of vision singularly changed. Dr. Patouillet has described the case of a family of *nine* persons who were all driven mad by eating the root of the *Hyoscyamus niger* or black Henbane. One of them leapt into a pond. Another exclaimed that his neighbour would lose a cow in a month, and a third vociferated that the crown piece of sixty pence would in a short time rise to five livres. On the following day they had all recovered their senses, but recollected nothing of what had happened. On the same day they all saw objects double, and, what is still more remarkable, on the third day *every object appeared to them as red as scarlet*. Now this red light was probably nothing more than the red phosphorescence produced by the pressure of the blood-vessels on the retina, and analogous to the masses of *blue*, *green*, *yellow*, and *red* light, which have been already mentioned as produced by a similar pressure in headaches, arising from a disordered state of the digestive organs.

Were we to analyse the various phenomena of spectral illusions, we should discover many circumstances favourable to these views. In those seen by Nicolai the individual figures were always somewhat paler than natural objects. They sometimes grew more and more indistinct, and became perfectly white; and, to use his own words, 'he could always distinguish with the greatest precision, phantasms from phenomena.' Nicolai sometimes saw the spectres when his eyes were shut, and sometimes they were thus made to disappear,—effects perfectly identical with those which arise from the impressions of very luminous objects. Sometimes the figures vanished entirely, and at other times only pieces of them disappeared, exactly conformable to what takes place with objects seen by indirect vision, which most of those figures must necessarily have been.

Among the peculiarities of spectral illusions there is one which merits particular attention, namely, that they seem to cover or conceal objects immediately beyond them. It is this circumstance more than any other which gives them the character of reality, and at first sight it seems difficult of explanation. The distinctness of any impression on the retina is entirely independent of the accommodation of the eye to the distinct vision of external objects. When the eye is at rest, and is not accommodated to objects at any particular distance, it is in a state for seeing distant objects most perfectly. When a distinct spectral impression, therefore, is before it, all other objects in its vicinity will be seen indistinctly, for while the eye is engrossed with the vision, it is not likely to accommodate itself to any other object in the same direction. It is quite common, too, for the eye to see only one of two objects actually presented to it. A sportsman who has been in the practice of shooting with both his eyes open actually sees a double image of the muzzle of his fowling-piece, though it is only with one of these images that he covers his game, having no perception whatever of the other. But there is still another principle upon which only one of two objects may be seen at a time. If we look very steadily and continuously at a double pattern, such as these on a carpet composed of two single patterns of different colours, suppose *red* and *yellow*; and if we direct the mind particularly to the contemplation of the red one, the green pattern will sometimes vanish entirely, leaving the red one alone visible, and by the same process the *red* one may be made to disappear. In this case, however, the two patterns, like the two images, may be seen together; but if the very same portion of the retina is excited by the direct rays of an external object, when it is excited by a mental impression, it can no more see them both at the same time than a vibrating string can give out two different fundamental sounds. It is quite possible, however, that the brightest parts of a spectral figure may be distinctly seen along with the brightest parts of an object immediately behind it, but then the bright parts of each object will fall upon different parts of the retina.

These views are illustrated by a case mentioned by Dr. Abercrombie. A gentleman, who was a patient of his, of an irritable habit, and liable to a variety of uneasy sensations in his head, was sitting alone in his dining-room in the twilight, when the door of the room was a little open. He saw distinctly a female figure enter, wrapped in a mantle, with the face concealed by a large black bonnet. She seemed to advance a few steps towards him, and then stop. He had a full conviction that the figure was an illusion of vision, and he amused himself for some time by watching it; at the same time observing that he could see through the figure so as to perceive the lock of the door, and other objects behind it.*

If these views be correct the phenomena of spectral apparitions are stripped of all their terror, whether we view them in their supernatural character or as indications of bodily indisposition. Nicolai, even, in whose case they were accompanied with alarming symptoms, derived pleasure from the contemplation of them, and he not only recovered from the complaint in which they originated, but survived them for many years.—Mrs. A., too, who sees them only at distant intervals, and with whom they have but a fleeting existence, will, we trust, soon lose her exclusive privilege, when the slight indisposition which gives them birth has subsided."

As Sir David has not advanced all his proofs and experiments in confirmation of his theory, that the "mind's eye" is really the "body's eye," we can neither be satisfied of its truth, nor fairly attempt to disprove its accuracy. Yet we venture to make one remark. Memory is the preservation of the impressions which have formerly been transmitted to the mind by the senses from without, or from the organic functions and sympathies within; such, at least, would be our definition of it. Memory is, therefore, a composite thing, the result of different impressions. Our remembrance of a friend implies our recollection of his external form, his voice, his character, and so on; our recollection of a place, our native village for example, is the recollection of the pleasant meadows which we *saw*, the bubbling rivulet which we *heard*, the hawthorn and the wild rose which we *smelt*, the balmy freshness of the air, so grateful to our sense of *feeling*, and the thousand things which appeal more particularly to the heart, and tell it of other and happier days.

Let us apply these facts to the explanation of spectral illusions. If a person sees before him the image of an absent or departed friend, we suppose that it is a capricious and fitful exercise of the memory. If the person does no more than *see* the spectre, it is manifest that this exercise of memory is but partial, a recal of only the impression formerly received through the sense of vision. Now Sir David believes that this is absolutely seated in the organic retina. But suppose the spectre a more comprehensive one, that we not merely see its form, but appear to hear its voice and listen to its admonition—or in place of imagining, as Sir David has beautifully done, the panorama of Mont Blanc gliding in, for a moment, between us and St. Paul's, let us venture to mount to the summit of that cathedral—let us glance at the mighty city at our feet, and, whilst musing on its future destiny, transplant ourselves in fancy to Rome—see the city of Romulus spread before us, its triumphs, its glories, and its crimes—pass in rapid review its rise, its zenith, and its fall—go to battle with Romulus, to the groves with Numa—hear Cicero in the Senate, and denounce his proscription—feel as true Romans felt, when tyrant after tyrant assumed the purple to commit crimes on an imperial scale—shudder at the march of Attila, and grieve at the sacking of the Bourbon—let us do all this, and we shall but have indulged in a reverie, in which many with classical recollections have indulged. Now the simple recollection of a striking landscape differs from this historical effort of memory and fancy only in extent—and the same may be said of the mere recal of the form of an absent person, or of this with the addition of other attributes, requiring the presence of other senses besides vision for their perception.

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* "Inquiries concerning the Intellectual Powers, and the Investigation of Truth. Edinburgh, 1830."

Now shall it be said, in this wider view of the subject, that the perception of what we do ideally perceive is not in the brain; but that the organic sense is the immediate and efficient agent? In recalling the image of the country, is the perception of the sounds which we seem to hear, of the fragrance which we seem to smell, seated in the organs of hearing and smelling? We apprehend not. It must be borne in mind, that the sense is not actually existent in the organic apparatus by which it is obtained. The eye is the organ of vision, but the actual faculty is, in all probability, seated in the brain. The eye is the apparatus by which visual phenomena make their impression on the brain; that impression having been made, the memory of it remains, and surely in the brain. The objection urged by Sir David Brewster, that spectra are affected by the motions of the eyes, in fact, by what modifies actual vision, is specious, but not conclusive. It must be recollected that impressions received through the medium of the eye, are impressions which have been produced and regulated by the laws of light. If the memory of them be accurate, it is the memory of impressions which, having been obedient to those laws, must continue to be so; if not, the memory is false, the spectre conjured up is monstrous, and, as it would sin against our experience, its very irregularity would convict it. Again, the spectre of a visual object, if raised by the mind, must be presented to the eye; if not, it could not possibly be the representation of what we had formerly seen, nor would it evince the agency of memory. We throw out these hints, without pretending to have paid great attention to the subject; and as neither ourselves nor our readers are particularly partial to metaphysical reasonings, in the pages of a practical journal, we pass to something else.

There is an optical illusion which may readily occur, which has attracted some attention, and of which it is not amiss for medical men to be aware; it is that by which depressions are conceived to be elevations, and elevations depressions, or by which intaglios are converted into cameos, and cameos into intaglios.

"This curious fact seems to have been first observed at one of the early meetings of the Royal Society of London, when one of the members, in looking at a guinea through a compound microscope of new construction, was surprised to see the head upon the coin depressed, while other members could only see it embossed as it really was.

While using telescopes and compound microscopes, Dr. Gmelin, of Wurtemburg, observed the same fact. The protuberant parts of objects appeared to him depressed, and the depressed parts protuberant; but what perplexed him extremely, this illusion took place at some times and not at others, in some experiments and not in others, and appeared to some eyes and not to others.

After making a great number of experiments, Dr. Gmelin is said to have constantly observed the following effects: Whenever he viewed any object rising upon a plane of any colour whatever, provided it was neither white nor shining, and provided the eye and the optical tube were directly opposite to it, the elevated parts appeared depressed, and the depressed parts elevated. This happened when he was viewing a seal, and as often as he held the tube of the telescope perpendicularly, and applied it in such a manner that its whole surface almost covered the last glass of the tube. The same effect was produced when a compound microscope was used. When the object hung perpendicularly from a plane, and the tube was supported horizontally and directly opposite to it, the illusion also took place, and the appearance was not altered when the object hung obliquely and even horizontally. Dr. Gmelin is said to have at last discovered a method of preventing this illusion, which was, by looking not towards the centre of the convexity, but at first to the edges of it only, and then gradually taking in the whole. 'But why these things should so happen, he did not pretend to determine.'

The best method of observing this deception, is to view the engraved seal of a watch with the eye-piece of an achromatic telescope, or with a compound microscope, or any combination of lenses, which inverts the objects that are viewed through it.* The depression in the seal will immediately appear an elevation, like the wax impression which is taken from it; and though we know it to be hollow, and feel its concavity with the point of our finger, the illusion is so strong that it continues to appear a protuberance. The cause of this will be understood from Fig. 14, where S is the window of the apartment, or the light which illuminates the *hollow* seal L R, whose shaded side is of course on the same side L with the light. If we now invert the seal with one or more lenses, so that it may look in the opposite direction, it will appear to the eye as in Fig. 15, with the shaded side L farthest from the window. But as we know that the window is still on our left hand, and that the light falls in the direction R L, and as every body with its shaded side farthest from the light must necessarily be convex or protuberant, we immediately believe that the hollow seal is now a cameo or bas-relief. The proof which the eye thus receives of the seal being raised, overcomes the evidence of its being hollow derived from our actual knowledge, and from the sense of touch. In this experiment the deception takes place from our knowing the real direction of the light which falls upon the seal; for if the place of the window, with respect to the seal, had been inverted as well as the seal itself, the illusion could not have taken place."†

II. ACOUSTIC ILLUSIONS.

The doctrines of sound have been long and successfully applied to the purposes of delusion, and its phenomena have contributed in a very great degree to establish the influence of superstitious feelings, and to enable the weak to deceive themselves and others. Within a certain angle sounds are imperfectly discriminated, and we judge with much uncertainty of their direction and distance; an uncertainty which is the foundation of the art of ventriloquism.

"If we place ten men in a row at such a distance from us that they are included in the angle within which we cannot judge of the direction of sound, and if in a calm day each of them speaks in succession, we shall not be able with closed eyes to determine from which of the ten men any of the sounds proceeds, and we shall be incapable of perceiving that there is any difference in the direction of the sounds emitted by the two outermost; If a man and a child are placed within the same angle, and if the man speaks with the accent of a child without any corresponding motion in his mouth or face, we shall necessarily believe that the voice comes from the child: Nay, if the child is so distant from the man that the voice actually appears to us to come from the man, we will still continue in the belief that the child is the speaker; and this conviction would acquire additional strength if the child favoured the deception by accommodating its features and gestures to the words spoken by the man. So powerful, indeed, is the influence of this deception, that if a jack-ass placed near the man were to open its mouth, and shake its head responsive to the words uttered by his neighbour, we would rather believe that the ass spoke than that the sounds proceeded from a person whose mouth was shut, and the muscles of whose face were in perfect repose. If our imagination were even directed to a marble statue or a lump of inanimate matter, as the source from which we were to expect the sounds to issue, we would still be deceived, and would refer the sounds even to these lifeless objects. The illusion would be greatly promoted if the voice were totally different in its tone and character from that of the man from whom it really comes; and if he occasionally speak in his own full and measured voice, the belief will be irresistible that the assumed voice proceeds from the quadruped or from the inanimate object.

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* "A single convex lens will answer the purpose, provided we hold the eye six or eight inches behind the image of the seal formed in its conjugate focus."

† Two woodcuts illustrate the explanations, but they can be understood sufficiently without them, although it is necessary to leave the referential letters. —*Ed.*

When the sounds which are required to proceed from any given object are such as they are actually calculated to yield, the process of deception is extremely easy, and it may be successfully executed even if the angle between the real and the supposed directions of the sound is much greater than the angle of uncertainty. Mr. Dugald Stewart has stated some cases in which deceptions of this kind were very perfect. He mentions his having seen a person who, by counterfeiting the gesticulations of a performer on the violin, while he imitated the music by his voice, rivetted the eyes of his audience on the instrument, though every sound they heard proceeded from his own mouth. The late Saville Carey, who imitated the whistling of the wind through a narrow chink, told Mr. Stewart that he had frequently practised this deception in the corner of a coffee-house, and that he seldom failed to see some of the company rise to examine the tightness of the windows, while others, more intent on their newspapers, contented themselves with putting on their hats and buttoning their coats."

The actual condition of the vocal organs in the exercise of ventriloquism is certainly ill understood. Let us hear what Sir David has to say.

"Ventriloquism loses its distinctive character if its imitations are not performed by a voice from the belly. The voice, indeed, does not actually come from that region, but when the ventriloquist utters sounds from the larynx without moving the muscles of his face, he gives them strength by a powerful action of the abdominal muscles. Hence he speaks by means of his belly, although the throat is the real source from which the sounds proceed. Mr. Dugald Stewart has doubted the fact, that ventriloquists possess the power of fetching a voice from within; he cannot conceive what aid could be derived from such an extraordinary power; and he considers that the imagination, when seconded by such powers of imitation as some mimics possess, is quite sufficient to account for all the phenomena of ventriloquism which he has heard. This opinion, however, is strongly opposed by the remark made to Mr. Stewart himself by a ventriloquist, 'that his art would be perfect if it were possible only to speak distinctly without any movement of the lips at all.' But, independent of this admission, it is a matter of absolute certainty, that this internal power is exercised by the true ventriloquist. In the account which the Abbé Chapelle has given of the performances of M. St. Gille and Louis Brabant, he distinctly states that M. St. Gille appeared to be absolutely mute while he was exercising his art, and that no change in his countenance could be discovered.* He affirms also that the countenance of Louis Brabant exhibited no change, and that his lips were close and inactive. M. Richerand, who attentively watched the performances of M. Fitz-James, assures us that during his exhibition there was a distention in the epigastric region, and that he could not long continue the exertion without fatigue."

There is an interesting chapter on the various mechanical attempts which have been made to imitate the voices of animals and of man. M. Vaucanson's flute-player and tabor-player were extremely ingenious automata, but a talking one, if perfected, would be infinitely more astonishing. Sir David, indeed, has no doubt that "before another century a *talking* and a *singing* machine will be numbered among the conquests of science." M. Recupelen actually constructed an automaton which could pronounce words, and even sentences, as *opera*, *astronomy*, *venez avec moi à Paris*, *&c.* It is curious to observe the effects of great elevations and the reverse on sound, and in consequence on the human voice.

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* "Edinburgh Journal of Science, No. xviii. p. 254."

"In the region of common life, and even at the stillest hour of night, the ear seldom rests from its toils. When the voice of man and the bustle of his labours have ceased, the sounds of insect life are redoubled, the night-breeze awakens among the rustling leaves, and the swell of the distant ocean, and the sounds of the falling cataract or of the murmuring brook, fill the air with their pure and solemn music. The sublimity of deep silence is not to be found even in the steppes of the Volga, or in the forests of the Orinoco. It can be felt only in those lofty regions,

Where the tops of the Andes
Shoot soaringly forth.

As the traveller rises above the limit of life and motion, and enters the region of habitual solitude, the death-like silence which prevails around him is rendered still more striking by the diminished density of the air which he breathes. The voice of his fellow-traveller ceases to be heard even at a moderate distance, and sounds which would stun the ear at a lower level make a feeble impression. The report of a pistol on the top of Mont Blanc is no louder than that of an Indian cracker. But while the thinness of the air thus subdues the loudest sounds, the voice itself undergoes a singular change: the muscular energy by which we speak experiences a great diminution, and our powers of utterance, as well as our power of hearing, are thus singularly modified."

Dr. Colladon made the reverse experiment in descending in the diving-bell at Howth in 1820.

"We descended," says he "so slowly that we did not notice the motion of the bell; but as soon as the bell was immersed in water, we felt about the ears and the forehead a sense of pressure, which continued increasing during some minutes. I did not, however, experience any pain in the ears; but my companion suffered so much that we were obliged to stop our descent for a short time. To remedy that inconvenience, the workmen instructed us, after having closed our nostrils and mouth, to endeavour to swallow, and to restrain our respiration for some moments, in order that, by this exertion, the internal air might act on the Eustachian tube. My companion, however, having tried it, found himself very little relieved by this remedy. After some minutes, we resumed our descent. My friend suffered considerably; he was pale; his lips were totally discoloured; his appearance was that of a man on the point of fainting; he was in involuntary low spirits, owing, perhaps, to the violence of the pain, added to that kind of apprehension which our situation unavoidably inspired. This appeared to me the more remarkable, as my case was totally the reverse. I was in a state of excitement resembling the effect of some spirituous liquor. I suffered no pain; I experienced only a strong pressure round my head, as if an iron circle had been bound about it. I spoke with the workmen and had some difficulty in hearing them. This difficulty of hearing rose to such a height, that during three or four minutes I could not hear them speak. I could not, indeed, hear myself speak, though I spoke as loudly as possible; nor did even the great noise caused by the violence of the current against the sides of the bell reach my ears."

Sir David has given some curious details of remarkable feats of strength, which have been exhibited at different times by individuals of extraordinary physical powers. Of these the most astonishing was a man named Topham. Dr. Desaguliers, who minutely observed his feats, has calculated that the strength of the weakest men being 125lbs. and that of very strong men 400, the strength of Topham was 800; his weight was 200.

The following statements appear nearly incomprehensible to us, and although we casually heard the same assertions made in mixed company many months ago, we have never investigated their truth or fallacy.

"One of the most remarkable and inexplicable experiments relative to the strength of the human frame, which you have yourself seen and admired, is that in which a heavy man is raised with the greatest facility, when he is lifted up the instant that his own lungs and those of the persons who raise him are inflated with air. This experiment was, I believe, first shown in England a few years ago by Major H. who saw it performed in a large party at Venice under the direction of an officer of the American Navy. As Major H. performed it more than once in my presence, I shall describe as nearly as possible the method which he prescribed. The heaviest person in the party lies down upon two chairs, his legs being supported by the one and his back by the other. Four persons, one at each leg, and one at each shoulder, then try to raise him, and they find his dead weight to be very great, from the difficulty they experience in supporting him. When he is replaced in the chair, each of the four persons takes hold of the body as before, and the person to be lifted gives two signals by clapping his hands. At the first signal he himself and the four lifters begin to draw a long and full breath, and when the inhalation is completed, or the lungs filled, the second signal is given, for raising the person from the chair. To his own surprise and that of his bearers, he rises with the greatest facility, as if he were no heavier than a feather. On several occasions I have observed that when one of the bearers performs his part ill, by making the inhalation out of time, the part of the body which he tries to raise is left as it were behind. As you have repeatedly seen this experiment, and have performed the part both of the load and of the bearer, you can testify how remarkable the effects appear to all parties, and how complete is the conviction, either that the load has been lightened, or the bearer strengthened by the prescribed process.

At Venice the experiment was performed in a much more imposing manner. The heaviest man in the party was raised and sustained upon the points of the fore-fingers of six persons. Major H. declared that the experiment would not succeed if the person lifted were placed upon a board, and the strength of the individuals applied to the board. He conceived it necessary that the bearers should communicate directly with the body to be raised. I have not had an opportunity of making any experiments relative to these curious facts; but whether the general effect is an illusion, or the result of known or of new principles, the subject merits a careful investigation."

This notice, for it is neither review nor analysis, must draw to a close—indeed we have extracted all the more interesting parts which bear upon medical science. The following facts respecting the capability of resisting heat are worth transcribing.

"But even when the fluid requires a high temperature to boil, it may have other properties, which enable us to plunge our hands into it with impunity. This is the case with boiling tar, which boils at a temperature of 220°, even higher than that of water. Mr. Davenport informs us, that he saw one of the workmen in the King's Dock-yard at Chatham immerse his naked hand in tar of that temperature. He drew up his coat sleeves, dipped in his hand and wrist, bringing out fluid tar, and pouring it off from his hand as from a ladle. The tar remained in complete contact with his skin, and he wiped it off with tow. Convinced that there was no deception in this experiment, Mr. Davenport immersed the entire length of his fore-finger in the boiling cauldron, and moved it about a short time before the heat became inconvenient. Mr. Davenport ascribes this singular effect to the slowness with which the tar communicates its heat, which he conceives to arise from the abundant volatile vapour which is evolved 'carrying off rapidly the caloric in a latent state, and intervening between the tar and the skin, so as to prevent the more rapid communication of heat.' He conceives also, that when the hand is withdrawn, and the hot tar adhering to it, the rapidity with which this vapour is evolved from the surface exposed to the air cools it immediately. The workmen informed Mr. Davenport, that, if a person put his hand into the cauldron with his glove on, he would be dreadfully burnt, but this extraordinary result was not put to the test of observation.

But though the conjurors with fire may have availed themselves of these singular properties of individual bodies, yet the general secret of their art consisted in rendering the skin of the exposed parts callous and insensible to heat,—an effect which may be produced by continually compressing or singeing them till the skin acquires a horny consistence. A proof of this opinion is mentioned by Beckmann, who assures us that in September 1765, when he visited the copper works at Awestad, one of the workmen, bribed by a little money to drink, took some of the melted copper in his hand, and after shewing it to the company, threw it against a wall. He then squeezed the fingers of his horny hand close to each other, held it a few minutes under his arm-pit to make it perspire, as he said, and taking it again out, drew it over a ladle filled with melted copper, some of which he skimmed off, and moved his hand backwards and forwards very quickly by way of ostentation. During this performance, M. Beckmann noticed a smell like that of singed horn or leather, though the hand of the workman was not burned. This callosity of the skin may be effected by frequently moistening it with dilute sulphuric acid. Some allege that the juices of certain plants produce the same effect, while others recommend the frequent rubbing of the skin with oil. The receipt given by Albertus Magnus for this purpose was of a different nature. It consisted of a non-conducting calcareous paste, which was made to adhere to the skin by the sap of the marsh-mallow, the slimy seeds of the flea-bane, and the white of an egg."

It appears that Mr. Chantry, the eminent sculptor, has recently exposed himself to heated air at a temperature considerably exceeding that encountered by Sir Joseph Banks and Sir Charles Blagden in their celebrated experiments. The temperature of the air in the room which they entered was, at the highest, 260°. The furnace employed by Mr. Chantry for drying his moulds is about 14 feet long, 12 feet high, and 12 feet broad. When raised to its highest temperature, with the doors closed, the thermometer stands at 350°, and the iron floor is red hot. The workmen often enter it at a temperature of 340°, walking over the iron floor with wooden clogs, which are of course charred on the surface. On one occasion Mr. Chantry, accompanied by five or six of his friends, entered the furnace, and, after remaining two minutes, they brought out a thermometer which stood at 320°. Some of the party experienced sharp pains in the tips of their ears, and in the septum of the nose, whilst others felt a pain in their eyes.

Here we conclude. We think it unnecessary to add any formal recommendation of this little volume, which combines amusement with instruction, and is equally adapted for youthful intelligence, and for the leisure of those whose years are riper.

XXV.

DEATH FROM INJECTION OF AN ENCYSTED DROPSY.

A GIRL had been tapped by M. Dupuy five times for encysted abdominal dropsy. On the sixth time he proceeded a step further, indeed a step too far. After having made a puncture he injected through a gum-elastic tube the vapour of heated wine. Inflammation succeeded, extended to the abdomen, and in thirteen days the girl died. No cadaveric examination was permitted, but on puncturing the abdomen a large quantity of fetid yellow matter escaped. —*Journal de Bourdeaux, Dublin Journ. July*, 1832.

XXVI.

FUNGOUS TUMORS OF THE DURA MATER AND OF THE BONES OF THE SKULL.

OUR contemporary, the Dublin Journal, gives an abstract of a memoir on these tumors, presented to the Academy of Sciences in February 1832, by M. Chelius of Heidelberg. As the notice is brief, and insusceptible of further condensation, and as we have a remark or two to offer upon it, we shall quote it entire.

"M. Chelius lays it down, that the fungous tumours of the dura mater and those of the bones of the cranium are not the same disease; they differ in their seat and in their nature. He cites several cases to support his opinion: 1st. A soldier, aged 36 years, was attacked by slight pain in the arm, at the insertion of the deltoid. This pain gradually increasing, became at length intolerable, and yet the form of the limb was not altered: soon after, the movements of the arm became different, and the pain made him keep it constantly at rest. This state of things lasted six weeks, when by accident, the arm was luxated; the dislocation was reduced, and the shoulder covered by compresses steeped in oxycrate, &c. There then appeared at the tip of the shoulder a swelling which soon extended to the fingers. Some months afterwards, there appeared at the middle of the forehead, a circumscribed tumour of the size of a pea, affected by occasional lancinating pains. When this tumour had grown to the size of a pea, it was found to proceed through an opening in the skull, and to pulsate. From this time the two tumours continued to increase in size, and violent nasal hemorrhages frequently came on, after one of which the patient died, twenty months after the supervention of the first pain in the arm. The aorta having been previously injected, the temporal, frontal, superciliary and nasal arteries were found to be twice as large as they naturally are, and were more tortuous, and had more ramifications, all of which penetrated the tumour. This last was situated on the surface of the dura mater; below it the brain was healthy but depressed; the tumour had no adhesion to the bones of the skull, it was united to the dura mater and to the pericranium by numerous vessels, which, arising from these membranes, penetrated its tissue. It consisted of a pulpy mass, yellowish white, similar to marrow, in which existed a few small scattered vessels, and small, irregular, and dentilated spiculæ; at its centre there was a more consistent steatomatous mass, which contained still less vessels. The frontal bone presented an opening two inches in diameter externally, and four lines more internally, the ethmoid, unguis, the horizontal portion of the frontal, and the base of the orbital cavity, had been destroyed to the depth of a line and half. The tumour penetrated into the two orbits, completely enveloping the oblique nerves, and extending into the nasal cavity, where the septum had been partly destroyed, and finally arrived to within half an inch of the external opening of the nose. The tumour of the right arm was of the size of a child's head; formed in the same way, of a pulpy substance externally, and a hard steatomatous mass at the centre, with many small cavities filled with serous fluid. The humerus in its upper portion was destroyed; inferiorly where it corresponded to the tumour, it was totally deprived of periosteum, but he could not trace any organic connexion between it and the tumour. M. Chelius thinks, that in this case the disease commenced in the periosteum and dura mater, and that the bones continued free from any injury by the disease, and were destroyed only by the pressure made on them by the tumours. 2nd. A woman who always had been accustomed to labour in the fields, at the age of 50 adopted a sedentary mode of life. At the age of 54 she began to complain of continual somnolence and severe headach; these symptoms increased, and soon after a small tumour appeared on the forehead. This at first was not painful, but gradually enlarging, it produced frequent faintings and constant sneezing; it finally extended over the whole forehead, covered the right eye, and confounded itself with the parotid gland; it was hard in some places, and soft in others, with fluctuation in its centre. The woman finally died, with all the symptoms of compression of the brain. The opening of the body showed that the tumour was situated between the pericranium and bones of the skull. The pericranium was so dense and so adherent to the bone that they could not be separated without laceration. The skull was not perforated, but presented some small openings, scarcely capable of admitting a very fine probe. 3rd. A man aged 30 years, who had been scrofulous in his youth, and often attacked by venereal, had on the middle of his forehead a tumour, which rapidly grew as large as a hen's egg; it was firm, without any trace of pulsation or of osseous perforation around its base. In time the tumour grew until it occupied the left side of the forehead, the root of the nose, and the orbit, from which the eye was expelled. The patient suffered dreadful headaches, became weak, and finally constantly comatose. After death, it was found that the fungous tumour was connected on one side to the dura mater, and on the other to the pericranium; in some parts the corresponding bones of the skull had undergone sarcomatous degeneration; so that M. Chelius considers this case to belong to the sarcomatous affections of the bones.—*Archives de Medicine, Mars*, 1832."

Now we do not see that the foregoing cases prove the assertion of M. Chelius that the fungous tumours of the dura mater differ in their nature from those of the skull. To tell us that they differ in their seat is merely to tell us an obvious truism, but surely the other assertion to which we have alluded should be borne out by something like argument, of which we have none, or by obviously apposite facts, which are equally deficient. In order to prove the broad statement with which M. Chelius sets out, we should have cases of tumours of both descriptions placed side by side, compared, and shewn by rigorous analysis and comparison to differ. Is this done—is it even attempted? It is not.

So far as we have seen, and several instances of the kind have fallen under our observation, there is no essential difference between the fungous tumours of the skull and those of the dura mater. Fungous tumours on the head may spring from the pericranium, from the cranial diploë, from the dura mater, or from the brain and cerebellum. The tumours generally partake more of the character of fungus hæmatodes than of those of scirrhus, characters which we need not enumerate. Analogy is not proof, yet analogical reasonings are frequently calculated to elicit truth and defeat error. When we look at the composition of malignant tumours elsewhere, do we not find that fungus hæmatodes invades almost every tissue, that its organic structure suffers comparatively small alterations from the influence of tissue, and, to come more closely to the point in dispute, that the differences between fungus of bone and fungus of fibrous membrane are very unimportant indeed? From these considerations, and still more from actual observation of fungous tumours of the dura mater and of the cranium, we do not hesitate to express our opinion that, so far we can form a just one, there is no essential difference between them. At all events, we cannot allow that the assertions of M. Chelius are proofs, or that his proofs are calculated to confirm his assertions.

XXVII.

Composition of Cow's Milk before and after Parturition.*

M. Lassaigne has made some experiments on this subject; the results are contained in the following short summary.

Forty-two days before calving, the milk was yellowish-white, sp. gr. 1063, coagulated by heat, restored the colour of reddened litmus, and contained 78.4 per cent. of water.

One thousand parts contained, cream, 200; serum, 800.

There was much albumen and free soda, but no trace of caseum, of sugar of milk, or of lactic acid.

This state continues until about eleven days before calving, when the specific gravity was only 1040; the milk was much less coagulable, and had lost its alcaline re-action. The proportion of cream and serum remained unaltered. The albumen had nearly disappeared, and the caseum and sugar of milk, with lactic acid, were found to exist.

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* Annales de Chimie. Dublin Journ. July.

Four days after parturition, all trace of albumen had disappeared, sp. gr. 1035; otherwise same.

The only important alteration that afterwards takes place is the gradual diminution in the quantity of fatty matter.

On the sixth day after calving, there were in 1000 parts—

	Serum.	Cream.
	812	188
20th day........	922	78
30th day............	936	64

XXVIII.

M. Rodweiss on Uric Acid and its Decomposition by Nitric Acid.

Many analyses of uric acid have been made and they disagree, like most other analyses, among each other. M. Rodweiss has endeavoured to determine the most accurate, and obtained results different from all. Much as the uncertainty of medicine and disagreements of doctors have been the burden of the wit's jest and the philosophic sneer, we doubt if the uncertainties of chemistry are not equally great, though not equally palpable to the lettered and unlettered dunce.

The mean of M. Rodweiss' experiments gave for the composition of uric acid,

4 atoms azote. 3 atoms hydrogen.
10 —— carbon. 4 —— oxygen.

Atomic weight 153.1—capacity of saturation 5.298.

M. Rodweiss then formed and examined the purpuric acid of Prout, Vauquelin, Brugnatelli, and Quesnaville. His experiments prove that the acid of Prout, carefully prepared, is really a peculiar acid, having the property of producing a red solution with ammonia, and is not, as was advanced by Vauquelin, a combination of acid and colouring matter. The acid prepared by the process of Vauquelin is really a mixture of oxalic and purpuric acids. The erythric acid of Brugnatelli is, according to M. Rodweiss, a crystallizable combination of nitric acid and of purpuric acid, and this compound is procured also by the process of Quesnaville.—*Ibid.*

XXIX.

Vitreous Humour regenerated.

A Serjeant in the Garde Royale received an injury on the left eye which burst the globe and expelled the crystalline, vitreous, and aqueous humors. The palpebræ were ecchymosed; the conjunctiva red and bloated; and the lower part of the cornea was separated from its attachment to the sclerotic by an irregular cut, through which a portion of the iris protruded. The parts were washed, the iris carefully returned, the edges of the cornea approximated, the eyelids closed, and blood was drawn from the temporal artery. Ice to the head, sinapisms to the feet, constant darkness, and a vigorous diet were enjoined. During the night he was bled again, and next day cupping-glasses were applied between the shoulders. It was supposed that vision would be for ever lost, but *à notre très-grande et agréable surprise* the globe gradually refilled; on the 22d day the cornea began to assume a healing aspect, and in about six weeks it was perfectly cicatrized. The natural form, and almost the ordinary volume of the organ, were restored, and by the aid of a very convex glass, this soldier came to see objects distinctly, and continues to discharge all the duties of his office.—*Larrey's Clinique Chirurgicale—Glasg. Journ. Feb.* 1832.

XXX.

Cases of Vesico-Vaginal and Recto-Vaginal Fistula Cured.

Two cases of this dreadful deformity, in which operations were crowned with success, have been lately published.

Such cases are always valuable, because they encourage surgeons to persevere in attempts at removing loathsome and almost unmanageable ills, when they might be utterly disheartened by failures by far too numerous.

Case 1.* Mrs. R. æt. 22, had laboured under vesico-vaginal fistula since her first confinement, which had been protracted and severe; the finger passed readily through the fistula into the bladder, and for eight months many plans had been tried without success. M. Malagodi operated in the following manner.

Having placed the patient as if for lithotomy, he introduced the fore-finger of the right hand, covered with the finger of a glove, into the fistulous opening, and bending it, drew down the left border of the fistula to the orifice of the vagina; and then, with the other hand, he pared off the edges with a straight bistoury. The hand was changed, and the same operation repeated on the right border of the fistula. The pared edges were then brought in contact. To do this M. Malagodi reintroduced the right index finger into the opening, and brought down its left border, and with the left hand passed a small curved needle, fastened with a ligature, through it, near the posterior angle of the wound. A second and third needle were passed in the same manner, at equal distances from each other, and the opposite border was transfixed in the same manner, when the ligatures were tied and the sides of the opening thus kept together. The patient was placed on her back in bed, a catheter kept in the bladder, and the urine allowed to flow constantly through it. Until the morning of the third day the water was passed through the catheter only, but then it began to escape by the wound into the vagina. On the fourth day it was found that the two posterior sutures remained firm; and on withdrawing them the union of the sides of the fistula was complete. The anterior ligature, on the other hand, had torn the left border of the wound, and nearly a third of the original fistula thus remained unhealed. The edges of this were regularly touched with the nitrate of silver, the catheter being kept constantly in the bladder. This plan was completely successful at the end of a few weeks.

Case 2.* Isabella Pigot, æt. 28, was admitted into the London Hospital, Dec. 2, 1830, with vesico-vaginal fistula. The opening between the vagina and neck of the bladder was sufficiently large to admit the point of a fore-finger, and seemed to involve a small portion of the commencement of the urethra; it was oval, its long diameter lying transversely and about 1¼ inch from the orifice of the meatus urinarius. The flow of urine was constant but the retentive power of the bladder was not wholly destroyed. The edges of the aperture were callous to only a slight extent. She stated that four months previously she had been delivered of a still-born child after a protracted labour, in which the bladder had not been relieved. Her recovery was speedy, but since her confinement she had been unable to retain her urine.

On the 29th Dec. Mr. Luke proceeded to perform the following operation. The patient being placed as for lithotomy, a female catheter was introduced into the bladder through the meatus urinarius. Weiss's two-branched dilator of the female urethra was then passed per vaginam, and fully opened, by which the fistulous orifice was exposed. Attempts were made to pass tenacula through the orifice but they were found too little curved, and two hooks were therefore employed. Their points were introduced about an eighth of an inch from the internal side of the opening, and brought out at the same distance on the external, when the sides were next pared by two semi-elliptical incisions made transversely in the vagina; to make the internal it was necessary to use a scalpel, with one half the blade bent at a right angle with the other. There was now some difficulty experienced in passing the ligatures for closing the wound. Small curved needles held in a porte-aiguille would not answer. Mr. L. succeeded with larger ones less curved, passing one on each side of the urethra at a little distance from the edge of the wound; the ligatures when tightened perfectly closed the orifice. The dilator was withdrawn, and an elastic catheter secured in the urethra; the patient was then sent to bed, and ordered to lie on her face and allow the urine to drain on a cloth.

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* Raccoglitor Medico. Glasgow Journal, Feb.

* Medical Gazette.

No water passed by the wound till the 1st January, when the ligatures were found to have ulcerated from one side, and the edges of the wound to be so separated as to allow the escape of the whole of the urine. On the 3d the opening was larger than before the operation; the ligatures were removed, the catheter allowed to remain. 6th. Elastic catheter being stopped up was withdrawn. Another ligature was passed in the centre of the opening including more substance than before; the silver flat catheter was fastened in and the patient placed on her face. On the 11th the ligatures having produced ulceration were removed, but the wound still adhered; a clean catheter was introduced. 15th. Catheter has become stopped; wound re-opened and nearly of former size.

March 19th. Mr. L. pared the edges of the opening by carrying a single hook through the sides and excising them with a common scalpel; a single ligature kept them in contact. The patient was placed on her face and a catheter introduced as before. On the 26th, the ligature having produced ulceration was removed; the sides of the opening were adherent, and all the urine flowed by the catheter, which was allowed to remain. On the 9th April the catheter was removed; the fistulous opening was perfectly closed. A stillicidium urinæ remained for a short time, but as the parts regained their tone it subsided. On the 25th she was discharged cured.

Case 3.* An Irish woman, æt. 30, was admitted into the London Hospital on the 24th May, under the care of Mr. Scott. A fistulous communication was found to exist between the rectum and vagina, and the fæces escaped through it into the latter. Her first labour had occurred about ten weeks previously, and during a severe pain whilst the child's head was in the vagina, the attending midwife passed the hand into the vagina, at which time the patient felt something give way.

The bowels having previously been freely opened Mr. Scott operated on the 13th June. He commenced by pulling down the vagina with a double hook, then pared off the cartilaginous edges with a probe-pointed bistoury, brought the raw edges together, and retained them in contact by means of three sutures. She was strictly confined to slops that the parts might not be disturbed by the occurrence of motions. During the night she passed her urine thrice and rested well. On the following night she was very unwell and fainted twice. On the 17th she was ordered some castor oil by the dresser, which was followed by a motion and the passage of a part of the fæces by the vagina. On the 26th Mr. Scott made an examination of the parts. The edges of the opening had united throughout nearly their whole extent, a small ununited portion only being left through which some feculent matter passes when she has a motion. This is the last report, and consequently the result of the operation is not yet determined.

There is one circumstance to be recollected in perusing such cases as the foregoing. The recto-vaginal, or vesico-vaginal fistula is usually the consequence of labour, and although a temporary cure be obtained by operations, the patients are liable to future pregnancies. We must not then consider the case as concluded when the female leaves the hospital cured. Future inquiries should determine whether that cure is permanent. Unfortunately such inquiries are too often neglected, or even when made, the issue, if unfortunate, is not published so eagerly as the former seeming success.

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* Lancet, July 21, 1832.

XXXI.

Tic Douloureux of a Stump said to be cured by the Removal of a Portion of the Median Nerve.*

There is one disadvantage attending hospital reports as at present managed. The reporter, whoever he may be, is usually in such a hurry to open his budget, that he will not stop to learn the issue of a case before he gazettes it as a cure. The consequence is that patients have been dead or dying, at the very period when the success of the treatment employed has been going the rounds of the medical journals. If the result is afterwards made known it is done so in a parenthesis, and escapes many who read the former statement. We do not say that the case we are about to notice is an example of this fault, and yet we suspect that the narrator is scarcely justified in setting it down at present as an instance of cure from a particular operation. We had false facts enough in medicine, before the modern system of hospital reporting opened a fresh vein of the poisonous ore.

Case. Eliza Burkett, æt. 20, was admitted into the London Hospital, April 21, under the care of Mr. Luke.

"She stated that about three years and a half since, she was taken into St. Thomas's Hospital in consequence of severe injury to the left hand, occasioned by a fall. Every attempt to save it having been made, after two years amputation became necessary, on account of her general health suffering considerably from the excessive suppuration and painful sensations in the arm; the stump did not heal favourably; she suffered distressing agony, and her health again became affected. She was discharged from the hospital, and afterwards admitted into Cripplegate workhouse, under the care of Mr. Langstaff.* At that time the surface of the stump presented an unfavourable appearance; the skin covering the ends of the radius and ulna was very thin, excessively vascular, and the ends of these bones seemed likely to cause its absorption. There was also a constant state of convulsive action of the muscles of the stump, accompanied with agonizing pain. Poulticing, opiate lotions, belladonna, and gentle pressure by bandage, were employed to lessen her sufferings, but without any good effect.

Mr. Langstaff afterwards performed amputation above the elbow-joint by the flap operation; and previously to securing the arteries he drew out each nerve to the extent of half an inch from the surface of the stump with a tenaculum, and cut through them to prevent their interrupting the progress of cicatrization of the integumental parts. For some time she was relieved of all the painful sensations she had so long been distressed with; had no recurrence of hysteria or convulsion, and her health improved.

About two months after the last operation she applied at this hospital, complaining of severe pain in the stump, the extremity of which was inflamed and affected with spasmodic twitchings; she was constantly subject to headache, and was unable to obtain rest night or day; altogether her life was rendered so miserable that if relief could be procured, she was willing to undergo amputation at the shoulder-joint. The carbonate of iron, iodine, acetate of morphia, blisters in the axilla, leeches to the extremity of the stump, cupping at the nape of the neck, and various other remedies were employed, but without any beneficial effect, except the cupping, which partly relieved the pain in the head. She continued her attendance as an out-patient for about four months, subsequently to which an exfoliation of bone took place, and she applied at St. Bartholomew's Hospital, where Mr. Earle cut down upon the extremity of the stump. She returned to this hospital without any diminution of her sufferings; and after attending a short time, Mr. Luke having ascertained that the pain proceeded from that part of the stump where the median nerve appeared to terminate, proposed to remove a portion of the nerve, to which operation she consented.

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* Medical Gazette, July 13, 1832.

* "The early history of the case is partly taken from a paper by Mr. Langstaff, on the Healthy and Morbid condition of Stumps after Amputation, in the Medico-Chirurgical Transactions."

April 21st.—Mr. Luke made an incision in the course of the median nerve just below the axilla; and, after a little dissection, exposed and removed nearly half an inch. The woman thought that something was pulled, and complained of a sensation of numbness at the extremity of the stump: she immediately expressed herself entirely relieved from the pain, and could bear firm pressure upon it. In performing the operation, a small artery was divided, which required a ligature."

Some pyrexia succeeded and required saline medicines and venesection. Retention of urine succeeded, and she requires to have her water drawn off twice daily. The last report is dated June 12th, not two months from the performance of the operation, and it states that the wound is healed, that she is entirely free from pain, but that the retention of urine continues.

Now there are two considerations which induce us to think the reporter premature in giving this as a case of cure. In the first place, the period passed without pain, after the amputation performed by Mr. Langstaff, was longer than what has elapsed between the report and the operation on the median nerve, and yet we have seen that the former pause was deceptive, and that the disease returned. In the second place, it seems evident to us, from several circumstances, that the young woman is of an excitable, nervous, or hysteric habit, and we all know how difficult it is to treat such with success. We do not say that the above was a case of hysteria only, but we do say that there is much of that undefinable state of system mixed up with it, and that probably surgical operations will not put that out. However, be this the fact or be it not, we conceive the reporter hasty in publishing the case as one of cure.

In the same report which contains the preceding is a case of strangulated direct inguinal hernia. It was intestinal, had appeared suddenly three days previously after a strain; there was no fluid in the sac, and the stricture was very tight. We see no other features of great interest in the report. The man recovered, but an abscess formed just above the wound, and a considerable quantity of the superficial fascia sloughed.

In a case of stone impacted in the neck of the bladder, or rather in the prostatic part of the urethra, Weiss's instrument for the extraction of small calculi was ineffectually employed. An abscess formed in the perineum after its use. A staff was introduced into the urethra, and the stone being distinguished, by the finger in ano, to the right side of the perinæum and anterior to the prostate, it was cut down on and easily removed. The man sank about the sixth day after the operation. On dissection there was effusion of semi-purulent fluid into the cavity of the abdomen; a sloughy state of the fundus of the bladder; extensive suppuration of one kidney, with a calculus impacted in one of the calyces; softening of the other kidney; and dilatation of the ureters of both; the bladder thickened, and its mucous membrane inflamed and coated with lymph; and lastly, an abscess on the side of the prostate communicating with the urethra, and abscess in the perinæum. The patient stated, after the operation, that he had been operated on by Mr. Cline thirty years previously, when he was only eight years of age.

This case shews how necessary it is for the practitioner to make himself acquainted with the nature and causes of the alterations of the urine, in fact, with the connexion between them and the state of the urinary organs. In the present instance, the situation of the calculus and symptoms produced by it rendered it almost imperative on the surgeon to attempt its removal, yet that attempt was the immediate cause of death; and, under other circumstances, the performance or non-performance of an operation might make the difference of life or destruction to the patient. It is manifest that, with such structural alterations of the kidneys and bladder as existed in this case, there *must* necessarily be alterations in the character of their secretions, and in the working of their functions. Such alterations may or may not be apparent; that is not the question. It is certain that, if we carefully study the subject, we are less likely to be deceived, than if we give it the superficial examination it usually receives, and although at first the difficulties may seem great, they will be diminished, at all events, the further we proceed. We have already, on several occasions, recommended Dr. Prout's scientific work to the attention of the profession, and again seize the opportunity of repeating that recommendation.

XXXII.

Dr. Watson on Hæmaturia.

In one of the Lumleian lectures, which Dr. Watson has recently been delivering before the College of Physicians, there are some remarks on hæmaturia, which may be noticed.

Blood may proceed from any part of the secreting or excreting urinary apparatus—from the kidney, ureter, bladder, or even urethra, in consequence of stone—from the kidney or bladder, in consequence of malignant disease—from any part of the apparatus, in consequence of inflammation—from some determination to these organs, arising without obvious or definable cause, or occurring periodically or vicariously with the hæmorrhoidal flux, or in scurvy and purpura hæmorrhagica, or in some cases of dropsy, especially that occurring after scarlet fever, or when excessive venery has been indulged in. These, and probably some others, are causes of hæmaturia, and in determining which has operated in the individual case, consists the tact and sagacity of the practitioner.

Dr. Watson mentions the following instance of hæmaturia from one of the causes alluded to. A young man came to the Middlesex Hospital with hæmorrhage from the urethra, and said that he had lost a considerable quantity of blood in this manner in the course of a few hours. He stated that he had passed the previous night with a female in whom the catamenia had just returned, and he imagined himself inoculated with the flux. The bleeding was owing, no doubt, to rupture of a vessel or vessels in the excited urethra. We have seen an instance of the same kind and apparently owing to the same cause, but the patient had just recovered from severe gonorrhœa and inflammation of the mucous membrane of the bladder.

Blood in the urine communicates to it a red tinge, more or less deep, and by that tinge its presence is determined. But other substances and conditions of the system colour the urine. The prickly pear or Indian fig will do it. The Spaniards, on their discovery of America, eat largely of this fruit, and were alarmed by the consequence. Ellicot's people, in his travels for determining the boundary of the United States, ate plentifully of the same fruit, with the same result and the same alarm. Beet-root produces a simlar effect, and a curious instance of red-coloured urine, in a man accustomed to take beet-root for supper, is related by Dessault. Madder, some species of strawberries, and drinks of sorrel, are said to do the same. The simplest and most satisfactory criterion of blood in the urine, is afforded by raising the fluid to the boiling temperature; the blood will furnish a brown coagulum, while the rest will regain the natural colour of urine.

Let us glance at the diagnostic marks of hæmaturia, having its origin in the various parts on the conditions before mentioned.

Dr. Prout has said, that "blood derived from the kidney is generally equally diffused through the whole urine: derived from the bladder, it for the most part comes away, in greater or less quantity, at the termination only of the urinary discharge, the urine having previously flowed off nearly pure. With all due submission to Dr. P. we think this must depend in a great degree on circumstances; and, from what we have seen, we would not care to attach great importance to the distinction. There is one appearance, which, when present, is characteristic of hæmorrhage from the kidney, or commencement of the ureter—viz. the expulsion with the urine of small cylindrical portions of fibrinous coagulum, the moulds of the ureter; they are commonly whitish, and often look like slender maggots or small worms. Dr. Cullen says that he saw coagulum come away almost dry, like the half-burnt wick of a candle. The attendant symptoms of hæmorrhage from the kidney or commencement of the urethra are, probably, a sensation of heat, weight, or pain in the situation of the kidney, or one side of the body. If a calculus has previously descended from the kidney, or if the symptoms usually characterizing such a descent be present, the diagnosis is made still stronger. But if these kidney symptoms be absent, and those of stone, or inflammation of it, or diseased prostate be present, we may presume that the bladder is the seat of the hæmorrhage.

Dr. Prout thinks we may pronounce, with much confidence, on the existence of malignant disease, by a reddish sediment which the urine throws down, the characters of which are difficult of description, but strike the experienced eye.

The hæmorrhage occasionally accompanying strangury from turpentine or cantharides, is probably, from the character of the symptoms, the result of some inflammatory action. M. Renoult describes a troublesome hæmatuturia which affected the French troops in Egypt, especially the cavalry, and even their horses. There was much pain in the situation of the bladder, extending to the glans penis—frequent and urgent desire to make water, the last drops being often pure blood, and passed with acute pain. On examining the bladder after death, M. Renoult found its mucous membrane inflamed.

A diseased bladder will give rise to hæmorrhage, as all practical surgeons know. A curious case happened to Mr. Heaviside. An old East Indian, subject to nephritic complaints, was suddenly siezed with what seemed to be retention of urine. A catheter was passed, no urine flowed, and it was thought the instrument had not entered the organ, in the seat of which was an evident tumor. The patient died next day. The bladder was found distended with a large coagulum of blood, which had come from the diseased mucous membrane; there was no blood in the kidneys or ureter.

When pure blood comes away, it is probably from the urethra.

In many cases of hæmaturia, the symptoms are very indecisive, the causes very obscure. In such, Dr. Watson thinks the hæmorrhage usually renal, and probably he is right. Calculi may exist in the kidney, as every body knows, without giving rise to obvious symptoms, and may there give rise to hæmorrhage.

The expulsion of blood in hæmaturia is sometimes attended with rigors, as the passage of a bougie, of a small stone, &c. often is. Dr. Elliotson had a case of intermittent hæmaturia occurring in a person who had formerly had a Walcheren fever; it always accompanied the cold fit of an ague, and was cured by quinine.

Sometimes the blood coagulates in the bladder, and gives rise to much inconvenience, or even forms the nucleus for stone. It is to be suspected when, after the recent passage of blood by the urethra, the patient continues to void brown or dark urine, depositing a chocolate-coloured sediment.

This is the substance of Dr. Watson's remarks on hæmaturia.

XXXIII.

Two Lectures on the Primary and Secondary Treatment of Burn-

By Henry Earle, F.R.S. Surgeon to St. Bartholomew's Hospital, &c. 8vo. Stitched, pp. 59. 1832.

It is undoubtedly of great consequence to arrive at a rational, consistent, appropriate, and successful treatment of burns and scalds. That we have not yet done so must be acknowledged, and the causes of our failure are partly to be discovered in the nature of the lesion which the application of excessive heat induces, partly in the unphilosophic manner in which the injury has been viewed and treated. It may be admitted as a general principle and truth that when opinions are greatly divided on the treatment of a malady or injury, no particular plan is greatly superior to another. There is comparatively little contention on the mode of treating itch or ague, because the powers of sulphur and bark are so superior to those of other remedies as to meet with the ready assent of men of common understandings. But in more intractable complaints, where particular modes of treatment are less decidedly and widely efficacious, disputes are constantly engaged in, and parties claim the palm of superiority for the plan which they severally prefer and employ. How many specifics for tetanus have been advocated by men of talent and erudition—how opinions have been divided on the cure for hydrophobia—how many more than a thousand and one successful remedies have been proposed for the epidemic cholera in the short period which has elapsed between its rise and present fatal prevalence, we need not weary our readers by relating. The last proposition is always defended with as much eagerness and blindness as the first, and like the ephemeris it flaunts its day, and is entombed in the mists of the evening. For projectors of these schemes history contains no lessons, their own experience reveals no truths. Bigots or knaves, they continue to impose upon themselves and endeavour to impose on others, so long as the world is content to let them. Look at the present saline treatment of cholera, and pronounce whether folly could be carried further, than by those who imagine that they have discovered in tumblers of salt and water the antidote for this cruel pest. Yet so it is that confident assertions will always impose on the credulous many, and the spectators that paid their money to see a man creep into a bottle, were and will be but the representatives of the three estates of all the kingdoms of the world from Nineveh to this.

We said that the differences observed in the treatment of burns must not be considered as merely evidence of blindness on the part of practitioners, or of preference of bad to much better methods. Without doubt a good surgeon will treat a burn much better and more successfully than a bad one, and without doubt also some of the remedies which have at various times been proposed are superior to others. But to look for a panacea, to expect the discovery of a mode of treatment applicable to all cases appears to us to be a wild chimera. When the texture of the skin has been destroyed by fire, no earthly power can prevent the subsequent stages of sloughing, suppuration, granulation. To imagine that these stages can be obviated by any art, by any empiricism, is to suppose that the laws of the animal economy can be altered by medicine. We need not demonstrate that they cannot be so. It is in burns of a slighter description, where the surface of the cutis only is injured, where it is not killed throughout, that one practitioner is more successful than another, that judicious management produces a speedy cure, bad practice a protracted and injurious one. These remarks are directed against the indulgence of any notion of a specific for burns, against the foolish expectation of setting aside the ordinary operations of nature in the reparation of injuries. We do not discountenance care and attention, we do not degrade all surgeons to one level, we do not imply that one man will not follow the indications of nature whilst another will neglect them, we do not defend the shocking deformities produced, or at least permitted, by bad management, ignorance, and carelessness, but we do assert that success is owing to judgment, acquaintance with surgery in general, practical skill and assiduous attention, not to a bare adoption of particular views or employment of particular practice.

After these preliminary observations we shall put our readers in possession of the sentiments and experience of Mr. Earle upon the subject. As a hospital surgeon he must have had opportunities of seeing and treating many cases, and his opinions will therefore be entitled to the weight which such opportunities must necessarily confer. The object of Mr. Earle is to establish the treatment of burns upon "rational principles." Certainly such a substratum is very necessary for any doctrine, but unfortunately each speculator considers his principles rational, whatever they may be. Mr. Earle mentions a curious instance of the low degree of power of resisting heat possessed under particular circumstances by particular individuals.

"A lady who had been long resident in India, where she had a large family, and who had suffered considerably during her voyage home, soon after her return had the misfortune to set fire to her sleeve, which, together with part of her gown, was destroyed by the flame. She was quite dressed at the time, and her stays were only very slightly scorched on the outer side; her chemise did not appear in the least degree injured. I was called to her the day following the accident, when I found that the whole depth of skin of the entire arm, shoulder, neck, and side, down to the lower margin of the ribs, was destroyed, and had lost its vitality, the slough being deepest and longest to separate over the serratus magnus muscle, which was eventually in part exposed. Now, a very considerable part of this dead surface had not been at all exposed to the flame, the stays being only slightly scorched, but quite entire; yet the heat conveyed through them had produced such destructive effects upon the integuments. This case is certainly very remarkable; but I have no doubt that similar cases have occurred in various degrees, and I can only conjecture that the state of her nervous powers was impaired, and had in some degree lost its conservative influence."

Mr. Earle supposes that the excessive action of heat was owing in this and similar instances to some impairment of the nervous influence. It is well known that the integuments of paralysed parts are easily vesicated by the application of a degree of heat which would not produce the same effect on other parts. Mr. Earle very properly points out the necessity of attending to the *kind* of burn. In the first degree of burn the skin is reddened, but not vesicated; vesications however may subsequently occur. In the second degree, vesications, more or less extensive, are immediately induced, and in parts the cuticle is removed, leaving the surface of the cutis exposed, sometimes red and moist, sometimes dry from the influence of the atmospheric air. It is especially in these cases that good management will effect rapid cures, and bad treatment lead to the production of severe and tedious ulcerations. In the last degree of burn, the parts are killed to a greater or less depth. The surface of the skin assumes a very peculiar appearance. In parts the cuticle is peeled off, in parts adherent, seldom are there vesications over a part which is actually killed; we have however seen the skin subsequently slough under a vesication. The skin has generally a light yellowish brown appearance, it is rather mottled, in some parts dark or black, in others, where the cuticle remains, of a peculiar lack-lustre dull white. But whatever may be the colour, the sensation communicated to the fingers on touching the part is characteristic. Instead of the supple elastic integument the surgeon touches a hard, inelastic surface; the skin feels brawny, and indeed it looks so. We never have this degree of burn without the second and third degree on its outskirts. It is where the texture of the integuments or deeper parts is disorganized that their separation by sloughing must inevitably ensue.

A burn is dangerous in several ways. One of the third degree is always to be looked on with dread, if extensive. But a burn of the second degree is frequently fatal, when a great extent of surface is implicated; and it is thus that scalds destroy. Patients may die from burns of the third or the second degree without reaction—or reaction may ensue and they may die within an early period of inflammations of the serous or mucous membranes, or, as children not infrequently do, with symptoms of effusion on the brain—finally, they may sink after a still more protracted interval from the debility consequent on extensive suppuration, or from mischief lit up in the lungs or intestinal mucous membrane. We have seen death take place in all these ways, some of which are alluded to by Mr. Earle, some not, and we have no hesitation in stating that the mode of death from burns has not been thoroughly or scientifically investigated. It is quite obvious, from what has been here stated, that no one plan of treatment can possibly be applicable to burns of all degrees, and this is admitted by Mr. Earle.

We proceed to the consideration of the method which he recommends. Two opposite plans have been employed in all ages, and continue to be adopted by opposing parties in the present. One is the application of cold—the other the application of heat, or stimulants of some description. Mr. Earle says somewhat oddly, that his father was one of the *warmest* advocates for *cold* water.

"When the hot fluid has been directly applied to any exposed surface, as the hands, the speedy employment of the antidote, cold, will often prevent vesication, and the case will terminate by resolution. It more commonly, however, happens, that the part affected is at the time enveloped in some article of clothing, as the legs and feet with stockings; in which case more or less vesication is likely to occur, from the clothes retaining the hot liquid in contact with the skin. It unfortunately happens too frequently under these circumstances, that the first thing that is done is to remove the stocking or clothes, which never fails to bring away with it large portions of the cuticle, leaving the highly inflamed cutis quite denuded. If, instead of this forcible removal of the clothes, such limbs were to be immediately immersed in the coldest water, this most serious result would generally be prevented. The same clothes which were the medium for conveying and retaining the heat, may be made the readiest means of abstracting it, and diminishing the inflammation; and should it become necessary, in consequence of the formation of large vesicles, to remove them, they should be carefully cut away, and the vesicles preserved unbroken; by which the serious consequences which always follow the exposure of the highly inflamed cutis will be prevented. If this plan were more commonly inculcated, I am persuaded that much mischief would be avoided; as in a large majority of cases it happens that the bane and antidote are very near at hand, as reservoirs of cold water will generally be found in kitchens, laboratories, &c. where these accidents most frequently occur."

Mr. Earle recommends the application of cold in cases of scalds and slighter burns, especially of the extremities, and where the skin is not broken. That cold applications are better than others in these cases we are confident, but we doubt the efficacy of ordinary cold water. The plan which we always adopt, and which we have found answer best in cases of burn of the first degree, and in the first instance for burns of the second degree, is copious and continued ablution with a lotion containing spirit and superacetate of lead, followed by the application of an ointment consisting of equal parts of the unguentum plumbi and unguentum zinci. We know of no applications so soothing at first, and which so moderate inflammations afterwards as these. To the employment of cold water in cases of extensive scald there are serious objections. We saw a boy of 13 or 14 years of age, die soon after being soaked with cold water. The cutis was not in any part destroyed, and the boy died without the recurrence of reaction. It is well known also that the application of cold occasions a greater liability to inflammation of the serous and mucous membranes.

The stimulating plan certainly appears injurious in burns of the first and second degree. If the patient be excessively cold and in a state of extreme prostration it is better in such cases to use warmth than stimulants externally. Bottles of warm water should be applied to the feet and warm cordials given internally. In such cases it has seemed to us that the carded cotton or eider down is at first the best application. It serves to retain the temperature excited by the stimulants and warmth, and serves the purpose, so essential in these cases, of excluding the atmospheric air from the injured parts. If the principles we have mentioned be kept in view, the means of applying them may vary,—the liniment of lime-water and linseed oil—superacetate or carbonate of lead and oil—the absorbent powders of calamine, oxyde of zinc, or flour, &c. The latter has been much lauded, but we think it a dirty, troublesome nostrum. It forms a paste with the accumulating moisture and discharge, and is not to be tolerated when zinc or calamine can be procured.

We now come to the stimulating, or Mr. Kentish's plan of treatment. Whilst judicious surgeons must always smile at the eccentric theory on which that gentleman's practice is based, they cannot but confess that the practice itself is most valuable in the set of cases adapted for its employment. Those cases are burns of the third degree, in which the texture of the parts is more or less destroyed, and a very depressing effect produced on the nervous system. In such cases we cannot do better than bathe the parts in warm spirits of turpentine, and apply a terebinthinate ointment. Mr. Earle criticizes the subsequent stages of Mr. Kentish's treatment. Our readers are probably aware that that gentleman gradually diminishes the strength of the stimulating application, until he reaches simple dressings. Mr. K. recommends the discontinuance of stimulants as soon as the patient is free from pain, whereas Mr. Earle leaves the dressings undisturbed until suppuration commences.

“The practice which I have been long in the habit of pursuing, with very happy results, has been to bathe the parts with warm spirits of turpentine; and, as speedily as possible, to envelop every part most carefully with soft lint, thickly spread with the liniment of turpentine and resin cerate. It is better entirely to surround the extremities when burnt, and to retain the dressings with bandages, accurately but not too tightly applied. This application appears very soothing; and the young patient will often cease to cry, and will even fall asleep as soon as dressed.

Having very accurately covered every part of the burnt surface with the dressing, the patient should be suffered to remain quiet, and the dressing should not be disturbed for many days—not, indeed, until suppuration is fully established. If, on removing the dressings, deep sloughs present themselves, there is no better application than warm emollient poultices. After the separation of the sloughs, the wounds must be dressed, and treated like common ulcers; but it is not my intention, at the present moment, to enter upon the subject of the secondary treatment of burns. The same rules with respect to the mode and accuracy of dressing burns should be adhered to, whether we employ Kentish's ointment, or any other application. The principle of excluding the air and not unnecessarily disturbing the patient should be steadily kept in view, whatever may be the remedial means resorted to.”

We have only one objection to make, and it is this. We have had many cases of burn under our charge, and too many have, we are sorry to say, been severe. We never found that dressings could be continued in the manner advised by Mr. Earle. Children, who form the majority of the burnt, are restless and disturb the dressings in such a manner that it is not unusual to find the trunk or the limbs extensively exposed in the course of twelve or twenty-four hours after the dressing. It is indeed a distressing thing when the whole periphery of the trunk, or even of a lower limb is burnt, for with the utmost care and dexterity on the surgeon's part, portions of the surface soon become exposed. Nevertheless we freely acknowledge that Mr. Earle is right in point of principle: and "non-intervention," as far as is compatible with the proper contact of dressings, should be our motto, before the separation of sloughs, or occurrence of suppuration in less violent cases.

We also fully coincide with Mr. Earle on the subject of internal stimulants, and strongly recommend attention to the cautions he inculcates.

"It will generally be requisite, after the receipt of any considerable burn, to administer some cordial internally combined with opiates. Whenever the pulse is small and feeble, the extremities cold, and there exists a disposition to rigors, it will be right to administer some warm brandy, or wine and water, or ammonia, with from 5 to 60 minims of laudanum, according to the age of the patient. When the vital powers are not depressed, and the patient suffers much, the opium may be given without the spirit. Considerable judgment is required in administering cordials. The great advocate for this plan, Mr. Kentish, appears to have entertained some very visionary notions, which are mixed up with his really valuable and practical observations. He advises the giving powerful stimuli internally, on the principle of counter-irritation; and he advocates the perseverance in their use for several days, until secretion has taken place. It is true that he adduced some strong facts in illustration of this plan; but I could produce equally powerful arguments to prove that such a practice is most injurious and directly opposed to the dictates of common sense, and all the principles laid down for the treatment of inflammation. To adduce one memorable instance in which this stimulating plan was most injuriously persevered in, I will mention the cases of the firemen who suffered at the burning of Covent Garden Theatre. Several of these unfortunate men were admitted into this hospital, and died with every symptom of inflammation of the membranes of the brain and mucous linings of the lungs.

The stimulating plan was carried to too great an extent in these cases, which was fully proved by examination after death. If the vital powers be greatly depressed you may administer a cordial, and even repeat it until reaction has taken place; but when once that has occurred, it can rarely, if ever, be necessary to persevere in such a plan. When the first stage is passed, light and nutritious farinaceous food should be given, and the bowels gently regulated: opiates will often be required for some time, to allay the irritation and pain. Diarrhœa sometimes supervenes, and is occasionally beneficial when the discharge is very copious. From observing the occasional good effects resulting from spontaneous diarrhœa, when the discharge was profuse, in accelerating the healing process, Mr. Kentish strongly recommends the free use of purgatives under such circumstances, and I have known them very useful. The spontaneous diarrhœa, however, requires to be very carefully watched, as it may arise from a destructive inflammation of the mucous membrane of the bowels, which may require all our efforts to control."

We repeat, that the constitutional consequences of burns have not hitherto been investigated scientifically, although the inquiry is one of physiological as well as practical interest.

"In the second order of burns and scalds, when there is more or less of the cuticle destroyed, and the highly inflamed cutis exposed, it is right as soon as possible to exclude the air; and for this purpose, I believe you will find the lime-water and linseed oil a very efficacious remedy. When the vesications are very large, and cause pain from their distention, and when there is danger of their bursting from their bulk or situation, it is advisable to puncture them with a needle at several points, in the direction of the scales of the cuticle; this will allow of the escape of the serum without admitting the air to the cutis. But in all minor cases it is not necessary to do this, and whenever you can with safety leave the bladders untouched for one or two days, it is far better than puncturing them. By carefully pursuing this plan you will in most cases avoid that serious ulceration and sloughing, which so frequently follows the exposure of the inflamed cutis. The fluid will often be entirely absorbed, and the cuticle peel off, leaving the surface quite healed beneath it."

All this is true so far as it goes, but that is not far enough. When the cutis is exposed, cuticle may either be formed by a rapid process, or by a painful and tedious one of suppuration, perhaps ulceration. The difference of result depends in part on the actual injury which the excess of heat has inflicted on the structure of the cutis, in part on the length of time during which the latter has been exposed, and in a great degree on the surgeon himself. If he trusts to nature he will have a troublesome job, if he continues greasy applications he will be no better off, if he uses merely absorbent powders he will fail in many cases and be successful in a few, but if he does what we are about to mention he will succeed in many cases and fail but seldom. After adopting the plan which we have alluded to as applying to burns of the first and second degree, he must carefully watch when the surface of the cutis is beginning to secrete pus. It will then assume a peculiarly florid appearance, and the redder papillæ will give to it much of the aspect of a strawberry. Let him seize this moment of *washing* the surface with a solution of sulphate of zinc, or Bates's Red Wash, or of nitrate of silver, in the proportion of four grains or upwards to the ounce of water, according to the active or indolent appearance of the cutis. Having done this allow the surface to dry, or gently dry it with soft lint. Then sprinkle on the surface a mixture of calamine and oxyde of zinc powder, and treat it subsequently by these powders in the manner in which they are usually employed. It may be necessary to repeat the wash partially or generally, but the success of this method when judiciously used is certainly very considerable. All local treatment of superficial burns should be conjoined with appropriate constitutional treatment. Saline medicines and purging when there is excitement, and tonics when that excitement has passed away, will suggest themselves to all reflecting practitioners.

This concludes our notice of Mr. Earle's lecture on the primary treatment of burns and scalds. We think it judicious and calculated to do good. But we cannot in sincerity assert that it tells us any thing of which we were previously ignorant, or that it evinces the possession of principles or employment of practice superior to those of well-informed men. We are quite sure that if any person will step into one of our large hospitals, *not* St. Bartholomew's, he will see burns treated with views as sound, and with means equally well regulated and perhaps more varied, than what appear in our author's pages. But information is too frequently possessed in particular quarters which is not universally disseminated. This is the case with the treatment of burns. We have too often seen reason to deplore injudicious and mischievous applications employed, and young men appear to think that the management of these lesions is enveloped in a veil of mystery, impenetrable to the ordinary operations of sense. Such practical statements as those of Mr. Earle are calculated to disabuse them of this dangerous and vague illusion, and we seize all convenient opportunities of directing public professional attention to the subject.

SECONDARY CONSEQUENCES OF BURNS.

Mr. Earle makes several good remarks on the management of ulcers after burns, but we have not space for their insertion, and indeed they are only calculated for young men who are not yet hospital dressers or house surgeons, or for older ignorami, who are no better for having been so. Mr. Earle directs the attention of students to the manner in which contractions at the flexures of joints, in the neck, &c. occur after burns, points out their distressing consequences, and the power of proper care, position, and permanent extension during the process of cure, and for some time afterwards, in preventing such unseemly and, to the surgeon, disgraceful occurrences. It is curious that, after the cicatrization of a burn, there is a great disposition in the cutis to become welted and thickened. Continual traction and irritation are, doubtless, the ordinary causes of this, but Mr. Earle remarks that they are not always so.

"Still, however, it must be admitted that, in some parts of the trunk, where no such contraction can operate, the cicatrices after burns form prominent ridges, and are morbidly hard; probably in consequence of extensive destruction of the subcutaneous cellular tissue.* This will at times amount to an increased morbid growth to a considerable extent, which will have, when cut into, all the characters of a true scirrhus. Such a case occurred to me, some years since, in the person of the young female, of whose neck I now present you a drawing, exhibiting prominent pendulous tumours, one of which I removed, and approximated the healthy integuments, in hopes of obtaining union by first intention. Erysipelas supervened, and the surface granulated; and after it had healed, the same diseased growth returned nearly to the same extent. This is the only instance of the kind which I have met with, and it appeared to depend on some peculiarity of the individual, as the whole original cicatrix was freely removed. When such a horny web or cicatrix, as I have described, has contracted any joint, or the neck, it would appear, to a superficial observer, that the whole evil depended on the contracted integuments, by a simple division of which the limb would be instantly set at liberty. So deceptive is this appearance, that I have known, more than once, that surgeons have indulged this vain hope of affording relief, until a painful and ineffectual operation has convinced them of their error. In recent cases, occurring in any of the extremities, the contraction may be confined to the integuments, by dividing which the deformity may for a time be removed; but the same cause continuing to operate, will produce the same effect, and the cicatrix will again contract after the wound is suffered to heal up. When the contraction has been of longer duration the muscles acquire a new sphere of action, and afford an additional and powerful opposition to the free exercise of the limb. Lastly, in some cases we find that even the bony fabric becomes moulded and altered by the powerful constriction exerted on it by this gradual but certain process. In such cases it is hardly necessary to add, that the most severe operations cannot afford a prospect of even temporary alleviation."

Reflecting on these circumstances, it is well known that Mr. Earle, in the year 1813, excised a cicatrix, and brought the integuments together, in a direction at right angles with that in which the contraction had taken place. He has operated on more than twenty cases with success, and has not observed that subsequent return of contraction which is said to have occurred in the practice of some other surgeons. Of course great attention must be paid to the maintenance of a proper position after the operation.

"Mr. James constructed a very ingenious apparatus for maintaining the chin elevated after operations for relieving contractions of the neck. This plan, with certain modifications, I have found most beneficial not only in curing, but also in preventing such contractions. In slighter cases the wearing, night and day, a stiff soldier's collar will be sufficient protection against contraction, provided the integument immediately below the chin be not burnt. It has been asked, At how distant a period from the receipt of the injury success may be obtained? This must, of course, depend upon the situation of the burn, and extent to which the muscles and bones are implicated in the mischief. I have, however, been truly astonished to find at how remote a period contractions of the fingers, hands, and arms may be restored. A young lady, aged 17, applied to me for an affection of her spine: during my attendance, I observed that her right hand was much deformed, in consequence of very firm cicatrices which bound down her thumb and three fingers, so as to greatly interfere with the use of the hand. She had been burnt when quite an infant, and the defect had existed for nearly 16 years, growing with her growth. From this history it was to be apprehended that the tendons and muscles would afford a serious obstacle to any improvement. I proposed, however, to make a trial with only one finger, and explained my views to the lady and her friends. She cheerfully acquiesced, as she was very desirous of being able to reach an octave on the piano-forte, being very fond of music. I succeeded so perfectly with the first finger that I proceeded with the others, and the thumb; and, eventually, restored the hand, and enabled my patient to attain the object of her ambition.

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* "The speculations of Hildanus as to the causes of this induration may be amusing to some of my readers. 'Præcipuæ causæ turpitudinis cicatricum post combustionum curationes sunt, primo, quod cutis, caro, venæ, &c. vi ignis, contrahuntur et indurantur; secundo, quod humidum radicale (cujus beneficio vulnera et ulcera omnia cicatrizantur) vi ignis exiccatum consumptum est, inde fit ut quemadmodum siccus et aridus ager, spinas tortuosas zizania et omnia imperfecta, ager vero pinguis et humidus omnia perfecta producit: ita etiam ex caloris innati et humidi radicalis defectu cicatrices fiunt turpissimæ.'—*De Combust.* cap 14.

In performing operations for the removal of contractions, it will generally be better to excise the indurated cicatrix, although in some cases it may be divided on both sides, and dissected upwards or downwards, leaving it attached at one extremity; some portion will thus be retained, and the extent of wound will be less. In several cases, however, where this has been attempted, the detached cicatrix has sloughed, and no time has been gained. As the cicatrix is not a part of original formation it possesses less vitality, and is often very imperfectly nourished; when, therefore, only partially detached, it will generally perish. It often happens, that but little apparent good is effected at the time of the operation; but, by gradually extending the limb, in a few days the muscles and soft parts yield, and the contraction will be gradually removed. This occurs in a marked degree in contractions at the elbow, and of the wrist and fingers. Too forcible an extension should not be attempted at first; but, with the assistance of graduated splints, a little may be gained from day to day, until the limb is perfectly restored."

Mr. Hodgson has succeeded, it would appear, in removing contractions by mechanical contrivances, independent of any surgical operation. Mr. E. has twice adopted this practice. One patient, a girl, was affected with a contraction in front of the neck, and was greatly benefited by wearing a firm collar for a considerable time. The other patient had been burnt with lightning, and had the knee-joint contracted nearly to a right angle; the leg has been extended by means of a powerful double screw, but the whole cicatrix has ulcerated, and the tendon of the biceps can now be seen. The wound is as large as would have been made by the operation, and more time has been lost. When Mr. Earle published the first case in which he performed the operation, he was not aware that he had been anticipated by any other surgeon. He has since found that Hildanus has both recommended such an operation, and, to some degree, practised it; so true it is that there is nothing new, and so obvious it ought to be, that men should rather aim at being distinguished by sound judgment and reflection, than by a prurient desire of reputation for discoveries, which have probably been discovered and re-discovered a dozen times since the origin of civilization and learning.

Appended to the pamphlet are two lithographic plates, representing deformities after burns, and some instruments made by Mr. Ferguson, of Smithfield, for their prevention or removal. Before parting with the able and indefatigable author we beg to assure him that his pamphlet is calculated to be productive of benefit, by promoting the dissemination of good principles of treatment and eradicating bad.

XXXIV.

Tabulæ Anatomiam Comparativam Illustrantes, quas exhibuit Carolus G. Carus, Med. et Philos. Doctor, &c. Pars III. pp. 22, folio. Lipsiæ, J. A. Barth, 1831.

Professor Carus, in a series of nine lithographic plates, has very beautifully illustrated a branch of physiology, which is alike most difficult and interestingly important; viz. the history of the evolution of the embryo and fœtus in the various natural classes of the animal world.

The subjects which he has selected for this purpose are, in general, well adapted to convey clear and intelligible ideas of the different modifications of the generative process; and in order to give as comprehensive a detail of particulars as is necessary for this elaborate theme, he has embodied numerous observations of other authors with his own original researches. Like most of his countrymen, he employs the synthetic method of description; not proceeding from things which are most, to those which are least known, and illustrating the process of generation from the higher to the lower animals, but rather addressing himself to the more advanced student of Nature, who already is acquainted with the varied divisions of zoological arrangement, and proceeding from the humble polypi to the organization of the mammalia.

The first plate is illustrative of the mode of propagation in that tribe of zoophytes which, on account of the less perfect substance proper to their different organs, and from their character, as representing the elementary stamina of the animal kingdom, he proposes to call "oozoa." The genera figured are "lacinularia," "plumatella," and "hydra," all appertaining to the tribe of naked fresh-water polypes. A new species of the first genus found by Professor Carus in the Elbe, and which he calls "L. fluviatilis," forms the subject of the first nine figures. These little animals are grouped together to the number of about 20, and are attached by a common stem to the surface of webs; in each of these, a single ovum appears to be developed in the parenchyma of the body by the side of the intestinal canal; the ova drop out among the parent stems; in time they grow, and become similarly affixed, thus supplying the place of the polypes of a previous generation.

Figures from 10 to 17 exhibit the evolution of the germs of plumatella; according to the author, this is effected in three different ways—first, by germination; secondly, by the formation of ova, which possess a firm corneous covering of a brown colour; and, lastly, by ova of a different kind, translucid, and whose whole circumference is beset with delicate oscillatory cilia. We, however, much doubt whether these remarkable differences in the ova do not rather indicate something more than a mere difference of species; we may also observe, that the last-mentioned is by far the most common structure of the ova of zoophytes. Mr. Ellis, Professor Grant, and others, have particularly described it, as it is exemplified in different genera; and it is by means of the peripheral cilia that the ova of the most fixed and motionless zoophytes, such as the sponge, execute, for a time, the locomotive faculty, and are carried to a greater or less distance from the parent stock, which otherwise might be injured by the accumulation of the ova around it, and be thus prematurely destroyed. Professor Carus ascribes another function to these oscillatory cilia, and supposes them to be somehow connected with respiration.

It is well known that the propagation of some zoophytes, such as the hydra viridis of Trembley, is effected by germination, a process which our author considers to be not essentially different from the formation of ova; for a germ or bud is equivalent to an egg, and *vice versâ.*

The second plate illustrates the evolution of the fœtus in several of the mollusca, such as the anodonta (a bivalva), the aplysia, lymnæus or fresh-water snail, the sepia or cuttle fish, and the argonanta, or paper nautilus. In the molluscs of the bivalve shells, the ova are found first in the substance of the foot, behind the liver, and around the alimentary canal, and afterwards pass into compartments in the laminæ of the external gills;—in the space of eight days, the rudiments of the valves are perceptible, and the globule of Vitellus begins, as in the ova of the gasteropeda, to revolve regularly upon its axis; a motion which Carus attributes to the vortex, or eddy produced by the respiratory organs.

Among the figures which exhibit the generative process in the Gasteropodous Mollusk, as the aplysia and lymnæa, is a scheme of the singular revolving motions of their ova, which Professor Carus has observed to be more rapid in this, than in the preceding order (acephala.)

The remaining figures in this plate very satisfactorily shew the stages of evolution among some of the Cephalopodous Mollusca, viz. the Sepia Officinalis, and Loligo Sepiola; and to these is added the more than suspected figure of the embryo of the Ocythoë, or animal which inhabits the argonata argo, with the shell, published by Della Chiaja, in the continuation of the great work of Poli.

Table III. contains delineations of the various stages of the embryo in different tribes of the articulate series of animals, as of the intestinal worm (Spiroftera) from Nitzsch; of the medicinal leech, from Weber; of the spider, mole-cricket, and pine-moth.

The author considers certain motions which may be observed in the ova of the leech as being analogous to the above-described motions in the ova of the preceding classes, and as being essentially dependent on the respiratory actions. In the higher articulate animals a fatty substance (guttulum oleosum) is first to be perceived as a component part of the ovum, a part not found in the embryos of the mollusca, but which occurs in one form or another in those of all the higher classes.

Tables IV. and V. contain numerous figures of great interest, exhibiting the several stages of development observed by the author himself in a species of cyprinus, (c. dobulus, or dobel, a fish which is allied to the common tench, and carp.)

The details however are so minute, and elaborate, that we can afford only a very passing notice, and strongly recommend our readers to a studious perusal of the particulars.

The oily globule is observed here, as in the articulata, to be attached to the vitellus. On the 4th day after the detachment of the ovum, the rudiments of the embryo are visible; on the 6th its form can be plainly seen. The development of the intestinal canal from the membrane of the vitelline globule is illustrated by diagrams.

On the 7th day, the bodies of the vertebræ, the heart and brain simultaneously appear. On the 8th the lineaments of the organs of sense are manifest. On the 9th the natural divisions of the heart are seen; numerous branches from the vena cava constitute the rudiments of the liver; and thus prove the consentaneous origin of arteries and veins. On the 12th the bronchiæ are observed, and the arteries going to supply them. Six days after having quitted the ovum, the fœtus manifests the truly developed liver. The sacculus vitelli has passed entirely into the abdomen, and the swimming bladder is apparent near the spine.

Table VI. illustrates the generation of the salmon, shark, and pipe fish.

Table VII. shews the surprisingly beautiful metamorphoses of the tadpole to the perfect frog; and the evolution of the young of the salamander, of several serpents, lizards, and tortoises.

In Table VIII. we have numerous figures of the evolution of the chick, in our common fowl; and as it is expected that every medical man, however little taste he may have for comparative anatomy and natural history, should be acquainted with this part of the subject, we propose to revert to it in our next number, when we shall describe in detail the different figures of the eighth plate, and also the particulars of the ninth plate, which illustrates the process of generation in some of the mammalia.

In concluding the notice of this work by Carus we have the authority of a distinguished comparative anatomist, in designating it as one of high utility; and as a most correct compendium of what is known on the very important and mysterious subject of physiological research, that of generation. To those who are interested in the knowledge of the development of the fœtus, and we hope that every enlightened member of the medical profession is so, we strongly recommend an attentive examination of the plates.

XXXV.

Mr. Arnott and the Medico-Chirurgical Reviewer.

In the last number of this Journal, p. 221, et seq., some remarks were made upon a pamphlet on Diseases of the Vascular System, published by Dr. A. T. Wise, in Bengal, and transmitted to the Editor of this Journal. Dr. Wise accused Mr. Arnott of plagiarizing his ideas and publishing his cases. In the number of the Medical Gazette which immediately followed the publication of the Journal containing the article in question, there appeared a letter from Mr. Arnott directed to Dr. James Johnson, and accusing him, as Editor of the Medico-Chirurgical Review, or writer of the article, of assurance and partiality. The gentleman who actually wrote the critique complained of, forwarded an answer to Mr. Arnott's letter to the Editor of the Medical Gazette. That Editor would not insert it. As it is consonant with the principles of justice and common sense, that Mr. Arnott should not be suffered to make accusations without an opportunity of defence being afforded to the accused, the letter in question is inserted here.

It is not required by law, nor justice, nor reason, that the Editor of a periodical should affix his name to it. The Edinburgh and Quarterly Review, have no avowed nor responsible editors. Neither is it required that the name of the writer should be appended to an article in a periodical, whether the Editor be avowed or not. Such is the custom and it is a good one. But if an article give offence, and the author criticised or person remarked on reply to that article, it may appear to some that the writer should then declare himself. Whether he should or should not, appears to us to depend on circumstances. If the writer of the article has stated on his personal authority facts which are denied by the accused, then, as the dispute is one which must be decided in a great degree by the weight of character, we might in justice call on the accuser to confront the accused. But when the dispute is on the nature of the article itself, on the arguments it contains and the expressions adopted in it, there is no such necessity for confronting the parties; the matter is to be decided on its own merits, and may be shewn to be false or true, absurd or reasonable, without any reference to the man who penned it.

Such principles are defensible by argument, and, what is better, they are founded on propriety and justice. They have always been acted on by the conductors of this Journal, and whatever may be the practice with other periodicals, they will always be the pole-star of this. We therefore, as we said before, insert the reply to Mr. Arnott, as it was transmitted to us by the Reviewer, because, if a gentleman is attacked for what he writes in a journal, he may expect to be allowed to defend himself in its pages. The conductors of this Journal entertain no ill-will towards Mr. Arnott, though they think he might have followed a better course than he has done. However, it matters little to them how violent personal attacks may be, when reason and justice are with them, for against such defences personalities are harmless, or recoil on him who hurls them. In order that the whole question may be laid before our readers, and that Mr. Arnott may not complain of partiality we insert his letter as well as the Reviewer's. Having done this we wash our hands of the controversy.

"*To the Editor of the London Medical Gazette.*

Mr. Arnott solicits the Editor of the Medical Gazette to do him the favour of giving insertion to the enclosed letter. When the conductor of a Quarterly Journal descends to personal attacks, either to gratify his own feelings or those of others, the weekly medical press is naturally looked to for aid in promptly repelling those calumnious charges.

" *To Dr. James Johnson, Editor of the Medico-Chirurgical Review.*

SIR,

An article in your journal for the present month has been pointed out to my notice, in which, assuming the representations of a writer in India to be correct, you think fit to accuse me of plagiarism, and of purloining the property of another. To your part in this transaction I shall advert subsequently; I first reply to the statements upon which you presume to make these charges.

From your account, it would appear that a Dr. Wise has recently published, at Calcutta, a pamphlet upon the Diseases of the Vascular System; and that, not in the printed essay, but in a letter accompanying a copy of it, to you or some one else, he takes the liberty of asserting that to him, while house-surgeon at St. Bartholomew's, I am indebted for my attention being first drawn to the subject of phlebitis—that I published as my own 'opinions,' 'cases' to which he first directed my attention—and that the three first cases which I have related were those alluded to. Without commenting on the length of time which has elapsed between the publication of my paper on the Secondary Effects of Inflammation of the Veins, and the advancement of these charges, I at once answer that they are unfounded. My attention was *not* called to the subject of phlebitis by Dr. Wise; I did *not* derive any cases, materials, facts, or opinions from him; nor do I know what were, or may be, his opinions thereon.

I was in the habit of attending Mr. Lawrence's visit at the hospital before I ever saw or heard of Dr. Wise. The three first cases published in my paper, which that gentleman is pleased to insinuate that I stole from him, occurred in the wards of that hospital, under the care of Mr. Lawrence. *The dissections were made by Mr. Lawrence; and from Mr. Lawrence's notes, which he had the kindness to lend me, my account was derived.* I was in attendance at the hospital when these cases happened; I witnessed their daily progress, and it was the extraordinary circumstances accompanying them which arrested my attention; *not the suggestion of any one.* I never saw a dissection by Dr. Wise of a patient who died from phlebitis, or any drawing of his on that subject. I am not aware of what is meant by 'the result of Dr. Wise's labours on the pathology of the vascular system:' the only opinions of his that came to my knowledge were some speculations analogous to those already promulgated by several French writers, upon a supposed affection of the veins in typhoid fevers and erysipelas, and certain changes which had been observed in the blood of the veins in persons who had died of malignant disease.

Thus much for the charges; and now, sir, let me acknowledge, as I ought, the sense I entertain of the manner in which you have brought them forward. You set out by proclaiming that you are going to do 'an act of justice;' you expatiate on the cruelty of a man's having any credit or emolument wrested from him by the grasp of another; you mention my name in connexion with plagiarism, and with purloining the property of another; and, after all this, you have the assurance or simplicity to pretend that you are perfectly impartial—that you espouse neither side, and are no party in a quarrel of which I now hear for the first time. I will answer for it that there is not another editor of a medical journal who would have published portions of a letter, containing such allegations against any individual, without making some inquiries as to their veracity—more especially if conscious that three months must intervene before any answer thereto could appear in his pages. For you, sir, there is no excuse in giving currency to accusations, the truth or falsehood of which you had the means of ascertaining. You noticed my paper at some length, and therefore ought to have known that the three cases which I am accused of having assumed as my own, I did not cite as such, but as belonging to the distinguished surgeon in whose practice they occurred, and to whom, in relating them, I acknowledged my obligation.

I am, sir,

Your obedient servant,

JAMES M. ARNOTT.

2, *New Burlington-st.*

July 5, 1832."

To the Editor of the Medical Gazette.

Sir,—In the Number of the Medical Gazette published on Saturday, July 13th, I observe a communication from Mr. Arnott, complaining, in no measured terms, of an article which appeared in the Medico-Chirurgical Review for the present month. As the writer of that article I shall reply to Mr. Arnott, and although insinuations which might well have been spared are directed by that gentleman against Dr. James Johnson, I trust that I shall display more command of temper, and adopt a more gentlemanly tone than Mr. Arnott has done. Dr. Johnson was not the author of the article in question, nor was he aware of its existence till after its publication. I agree with those who consider the editor of a periodical work responsible, both legally and morally, for what may appear upon its pages. But I protest against the practice of attributing to an editor every sentiment as his own, and of impugning his motives on every occasion, when an author or gentleman feels himself aggrieved by a critique or a remark. It is a species of personality, masked it may be, but not the less reprehensible.

But Mr. Arnott's personality is not masked; it is open, undisguised, and gross. He accuses Dr. James Johnson of "the assurance or simplicity to pretend that he is perfectly impartial," language which I shall not stoop to denounce—a mode of argument to which Dr. Johnson would not condescend to reply. And this abuse is heaped upon Dr. Johnson, because Mr. Arnott has chosen to assume that Dr. Johnson wrote an article which, in point of fact, he scarcely read, until this violent attack must have called his attention to it.

I will now, Sir, proceed to examine the grounds of Mr. Arnott's indignation, and to defend, if defence is possible, the article which has stung him into such extravagant anger. Mr. Arnott's charges appear to be threefold. First, that Dr. Johnson, as Editor of the Medico-Chirurgical Review, has published a letter reflecting on Mr. Arnott, without previously consulting him, Mr. Arnott; or, to use his own peculiarly gentlemanly phraseology, "he will answer for it that there is not another editor of a medical journal, who would have published portions of a letter, containing *such* allegations against any individual, without making some inquiries as to their veracity." Mr. A. is Quixotic in answering thus for editors in the lump; he may have enough to do to answer, on all occasions, for himself. Secondly, he protests against expressions and sentiments employed by the reviewer, and attributed by him to the editor. "When the conductor of a Quarterly Journal (says he) descends to *personal attacks*, either to *gratify his own feelings or those of others*, the weekly medical press is *naturally* looked to for aid in promptly repelling those calumnious charges." Mr. Arnott would appear to consider the maxim, divide et impera, a good one, for he thinks it *natural* that the weekly press should be used as a means of defence or offence against the quarterly; I have just shewn that he will answer for all editors, including, I suppose, the monthly, against the unfortunate one selected by him for such signal chastisement. Thirdly, Mr. Arnott replies to the accusations of Dr. Wise.

I have already stated, and I repeat it, that Dr. Johnson was not the writer of the obnoxious article, nor was he concerned with it, directly or indirectly. The first and second counts of the indictment, then, are levelled against me, the third against Dr. Wise. I do not intend to act as umpire between these gentlemen; the quarrel is theirs—the stake, reputation—the natural judges are the public. But before that public I am now on my own defence, as a writer in a periodical, against the charges of Mr. Arnott, and I hope to shew that they are both ungenerous and unjust.

And first of the imputation, that "a letter was published containing *such* allegations, without inquiries being made as to their veracity." Mr. Arnott's ideas of the duties of editors must be a strange one, indeed, from the ready manner in which he *answers* for them, he seems to consider them an extraordinary race. If an editor should publish an anonymous slander (and such things have happened, incredulous as Mr. Arnott may be,) we would willingly join Mr. Arnott, or any honourable man, in denouncing the practice as treacherous and base. But when a statement is, to a certain extent, authenticated by the publicly-appended signature of a respectable man, it is too much to expect that any editor or writer should proceed to sift the evidence on both sides, and bandy letters from disputant to disputant, before he ventured to publish what he had received. If an accusation is openly preferred by one gentleman in the profession against another, I conceive that an editor is not only justified in inserting it, but that dishonour and disgrace should attach to him if he refused. And mark the parties in the present strife. One in a distant land, who can seldom have communication with Great Britain; the other a hospital surgeon in this metropolis, under the wing, I may say of his *natural* protectors, the weekly press. On which side the balance of interest is—on which side the preponderance of power lies, I need hardly stop to tell; but I know it must be evident that, in publishing the complaint of the surgeon in Bengal against the surgeon of the Middlesex Hospital, the editor of the quarterly review was exposing himself to the vituperation of the strongest.

The second charge advanced by Mr. Arnott applies to the manner in which the statements of Dr. Wise were introduced—to the expressions employed by the reviewer. I wish, Sir, I could intrude the whole of those expressions on your pages, that your readers, in fact, might judge of the caustic quality, not of sarcasms, but of compliments. I say, of compliments, for such they are, and Mr. Arnott must be thin-skinned, indeed, to feel the prick of the rose so sensitively as he has done. I appeal to all persons, unprejudiced by an excess of sensibility, to read those comments *throughout*, and say that they breathe aught but a tone of respect towards Mr. Arnott, tempered by a feeling of regret that he should fall under a public *accusation* of plagiarism. In the accusation itself I was not concerned, nor am I now; I stated, and I state it again, "we are no parties in the quarrel—we espouse neither side: but as this is a heavy accusation, it is imperative on Mr. Arnott to meet it and repel it."[*] I added, what think you, Sir! the sting of the libel! it was this. "In order that he (Mr. Arnott) may see with what he is charged, we shall insert the statement of Dr. Wise *as it is transmitted to us*, and we entertain no doubt, from the *high character which Mr. Arnott bears*, that he can satisfactorily remove the impression which such a statement, uncontradicted, would be calculated to produce."[†] Such are the calumnies of which Mr. Arnott complains, such his reasons for accusing Dr. Johnson of assurance, simplicity, and descending to personal attacks to gratify his own feelings. For shame, Mr. Arnott, for shame.

I have done all I proposed to do, defended myself, as reviewer, from Mr. Arnott's charges against me. I shall not examine his answer to Dr. Wise, for the latter gentleman will, in all probability, see that answer, and must vindicate himself, if vindication should seem to be necessary. Before I part from Mr. Arnott, let me give him a word of advice; less testiness will expose him, hereafter, to fewer mortifications, and he is much deceived if he thinks that noisy vapouring will either intimidate or convince. Any future notice of this affair from me will depend solely upon Mr. Arnott; but, however unwilling I may be to contend with one for whom I formerly entertained, and for whom I hope to continue to entertain a high respect, I owe it to myself, and to the Journal to which I have been a humble contributor, to repel argument by argument, and, disagreeable as it may be, to treat personalities as they deserve. I would, on all accounts, shun a contest with Mr. Arnott; but if he is determined to engage in one, I have sufficient firmness not to be daunted by his real merits or his idle wrath.

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[*] Med.-Chir. Review, No. XXXIII. p. 221.

[†] Ibid.

The Reviewer in the Medico-Chirurgical Review.

July 16th, 1832

XXXVI.

Mr. Crampton on Injuries of the Head.*

Our contemporary of the silent city, though silence is certainly not the present attribute of the Green Isle, is likely to prove a valuable addition to periodical medical literature. We cannot but suspect that something like a feeling of shame exists among the professional magnates of Ireland, at the imputation of sloth which has not been unfrequently pointed against them. The heaving and stirring of their brethren in London, and the steady activity of Scotland, have stimulated them at intervals into efforts of exertion and deeds of emprise. But these have been far from constant, and though the flame would flare brightly for a season, it sank anon into its socket. We have had some admirable papers from the Dublin surgeons and physicians—they have given us a volume or two of excellent memoirs—but the genius of Ireland speedily waved her emerald wand, and the restless spirits sank exhausted and contented with their transient energy.

Even now they have been unable to produce a purely medical journal, and surgery has been fused in the alembic of chemistry, before it was found sufficiently malleable to receive the impress of the Dublin doctors. But we do not despair. In the present age of reform and revolution, when ancient structures are discovered to be crazy, and the temple of Dulness offers an insecure sanctuary to her votaries, men who have been placed by fortune or by merit in high situations, begin to feel that they must either use their hands or tumble. This truth having become manifest in most civilized countries, we need hardly feel surprized that Ireland should begin to display symptoms of its operation.

Wide and more wide it spread o'er all the realm!

Seriously, we cannot but express our approbation of this effort on the part of our Irish brothers. Those who are acquainted with the state of medicine and surgery in Dublin entertain too favourable an opinion of it, not to wish that its treasures should be rendered more available and useful to the world. High as Edinburgh stands in the opinions of Europe, we sincerely think that nothing is wanting on the part of Dublin but exertion and perseverance, to enable her to challenge the world. Returning to the consideration of the Dublin Journal, we must again express our approbation of the manner in which it is conducted, and our belief that, if continued with the same amount of zeal, and an increase of experience, it will be the means of advancing the best interests of the profession, and enhancing the reputation of Irish medicine. The paper to which we would call particular attention, is one from Mr. Crampton. The sentiments which it contains, and which we shall certainly transcribe, are honourable to his feelings, and creditable to his intelligence.

"It has often been objected to medical men, who are extensively engaged in practice, that they seldom communicate the result of their experience in such a way as to make it as available as it might be to the junior part of the profession. That they occasionally put forth large and valuable works on particular departments of the healing art, and communicate through the periodical press, the particulars of some remarkable case or brilliant operation, is not to be denied; but this is not precisely the kind of information, or I should rather say, it is not the *only* information which the younger part of the profession are most anxious to obtain from them. They would, above all things, desire to learn in the shortest, simplest, and least expensive way, how a professional man of experience would manage certain cases which are of almost-daily occurrence, but with respect to which the greatest diversity of opinion and practice prevails among the highest authorities.

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* Dublin Journal, No. IV.

They read, for example, that in France amputation is performed while the gangrene (from external injury) is rapidly extending up the limb; in Great Britain, on the other hand, this practice is reprobated by the *generality* of teachers and of systematic writers.* Again, amputation of the thigh is performed in one manner in London, in another in Edinburgh, and in a third in Dublin; the same may be said of lithotomy. In England I believe it is the general practice to open large chronic abscesses by a small valvular puncture, and to draw off the fluid in portions from time to time. In Paris and in Berlin, on the contrary, the abscess is opened by an extensive incision, so as to give issue to the whole of the contained matter at once. Again, in the treatment of compound fracture of the skull, the trephine is much more generally employed in London than in Dublin. But without multiplying examples, I am warranted in stating broadly, that the modes of practice in London, Dublin, Edinburgh, Paris, and Berlin, are on some of the most important points of surgery, not only different from, but often absolutely opposite to each other. How useful then must it be to the practitioner to be enabled to examine and compare the facts, and the reasonings on which this diversity of opinion and practice is founded, and how noble a task for an enlightened criticism, uninfluenced by prejudices either national or personal, to enable the enquirer after truth, to view those various modes of practice by the clear light of science and experience. It may at the first view seem strange, that at a time when a greater intercourse exists between the different capitals of Europe, than a few years since existed between different parts of the same kingdom, and when by means of a weekly periodical press, the opinions and practice of one country are scarcely announced, when they are known in every other; that there should be not merely a national, but almost a provincial surgery. It would be foreign from my present purpose to investigate the causes of this diversity, although the inquiry might not be devoid of interest or even of utility, but I may observe in passing, that the causes lie deep among the most immutable principles of human nature. Uniformity of practice in an art which mainly rests on human opinion is plainly impossible, and if possible would not be desirable, unless the art were brought to the utmost degree of perfection of which it is susceptible; but as this can never happen, so long as the human mind is progressive in improvement, all that can be done for the advancement of knowledge, is to engage the greatest possible number of intelligent, active, and independent spirits in the pursuit, and to bring the result of their separate labours into juxta-position, in order that they may be examined and compared, and their relative merits experimentally ascertained. In this way there will be a gradual and therefore safe approximation to uniformity of practice, and a pro tanto advance towards the perfection of the art. That the publication of clinical lectures, and of (what is perhaps of still more value) the incidental clinical remarks of the hospital surgeon while 'going his rounds,' has done much towards the advancement of surgical knowledge, is not to be denied; but until the practice becomes more general than it is at present, I believe that hospital-surgeons cannot perform a better or more acceptable service to the profession and to the public than by becoming their own 'reporters,' and communicating from time to time, through the medium of the periodical press, the results of their experience, without waiting until they have time to give them the form of a a regular treatise, or what is still more deplorable, to expand them into a book; and surely if the practice of adulterating valuable medicines by the addition of some noxious, or, at best, useless ingredient be a punishable offence, those authors should not escape with impunity, who overlay some useful practical observation with the rubbish of a library. It may be objected to the plan of self-reporting, that it affords too wide a field for the exercise of vanity or of self-interest, and that even if the public had a sufficient guarantee for the integrity of the reporter, the influence of previous opinion, and a variety of other motives might induce him to view *his own case* in a very different light from that in which it might appear to a mere looker on; and this to a certain extent is true; but it is equally true, that a perfect corrective is at hand, and should always be applied. Let no case be reported on the authority of any individual, however trustworthy. Let every possible security be given against error, as well as fraud; if the case occur in hospital practice, misrepresentation will scarcely be ventured upon, and error will easily be detected and exposed. If in private practice, let some medical practitioner, who is acquainted with all the circumstances of the case, be referred to by name; as a further security, the name and residence of the patients (whenever it can be done so with propriety) should be inserted in the case; for want of this attention, surgical cases in particular, (however faithfully recorded,) are deprived of the greater part of their value; for it is not enough that an operation should be well and successfully performed, the great point to be ascertained is, how far it has been *permanently useful*, and this may be known by a re-examination of the patient after the lapse of a considerable time. We have read of the cutting out, '*with success*,' of large portions of the ribs, when affected by cancer, and the cutting off one-half of the face, when affected by the same disease; of removing a tumour of such dimensions, that it was difficult to say whether the tumour was cut away from the man, or the man from the tumour. But how far the subjects of these proceedings were compensated for the immediate pain and danger attendant on the operation, by a prolongation of life, or an abatement of suffering, can be learned only by following them from the hospital to their homes, if, indeed, they ever reach them after such 'successful operations.'

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* "It would appear, however, that opinion on this point has undergone a considerable alteration within the last few years in England.—*See* SIR A. COOPER's *Lectures*—GUTHRIE *on Gunshot Wounds*, and HENNEN's *Military Surgery*."

A Periodical Medical Journal, then, if conducted on the plan to which I have alluded, would faithfully reflect the state of medical opinion and practice in the country in which it was published, it would be, in a manner, the auto-biography of the healing art, the only kind of biography which, perhaps, has a claim to implicit credit; for it has been well remarked by a great writer, himself the best of biographers, that whatever desire the auto-biographer may entertain of appearing in a different character from his own, the man, as he is, will appear through every disguise he may assume. And so it is with medicine, the clinical cases, lectures, and remarks, which are published in the Weekly Medical Journals of London and Paris, have given us not only a professional, but almost a personal acquaintance with the distinguished men whose modes of practice, and even whose modes of thinking and of speaking, they so graphically describe.

The peculiarities which distinguish British from French surgery, are now as well known to the students in the Dublin hospitals, as to those who group round Mr. Brodie, Mr. Lawrence, M. Dupuytren, or M. Roux, in St. George's, St. Bartholomew's, the Hôtel Dieu, or the Charité. They can clearly perceive, that while the distinguishing character of the one is simplicity of practice, that of the other is complexity; and *perhaps* they may be disposed to think that, on some occasions, a *medium* might, with advantage, be found between 'the dose of house-physic and keeping quiet,' and the saignée, and sangsues, the boissons adoucissantes and delayentes, the potion calmante, the lavements and the demi-lavements, every third or fourth hour, and a variety of other remedies, which can leave the subject of so much skill and attention but little time for needful repose."

We have had a better opportunity of observing the practical working of the system of hospital reporting than Mr. Crampton. We do not hesitate to say that with much of good there is much of evil, and we own with regret that we see little likelihood of immediate improvement. In London there are three kinds of hospital reports, those furnished by pupils who conceal to the utmost both their names and occupation—those written by young men who are more or less known to the medical officers—and those supplied clandestinely, or at least without express acknowledgment, by the medical officers themselves. Of the first we can only say, that, so far as we have had an opportunity of comparison, and we have had such, they have been for the most part ridiculously incorrect, nor can we conceive the possibility of much good arising from them, at least under existing circumstances. The two last are always, or almost always genuine and authentic, but then they are liable to bias, and much of that *piquance*, which confers a flavour on the first description of report must necessarily be absent. On the whole we believe that the best, and fairest reports would emanate from intelligent and advanced pupils, known to the officers of the hospital, and yet not so closely connected with them as to be swayed by personal interest or private feeling. Perhaps it would be advisable that the reporter's name should be affixed to his report, and thus there would be every guarantee for authenticity, and the least objectionable safeguard against partiality. Some persons may object to this, that failures would not be published. They certainly would not be dramatized, nor is it right that they should be so. Would a private practitioner like his errors to be dragged before the public, blackened by private malignity, or caricatured by pert and vulgar ridicule. If a brother practitioner or haply an apprentice were to expose his little failings or even his great ones, and gibbet him to his circle and the world as no better than a malefactor, or no worse than a fool, would he not exclaim, and exclaim most justly, against the iniquitous brutality of the scoundrel. Yet what each and all would denounce if practised on himself, appears to be considered as tolerably just when employed against obnoxious hospital surgeons. Justice is justice, and what is criminal in the case of a private individual, is equally criminal, however the guilt may be veiled by casuistry or passion, in the instance of a public functionary.

We take it that the great object of hospital reports is professional utility—the diffusion of knowledge which would otherwise be buried in cloistered walls, or narrow circles. False knowledge is worse than none, in fact it can hardly be considered as knowledge at all. In our profession the basis of all reasoning is facts—our theories and our practice hinge entirely upon them. It is therefore our interest to take every possible precaution that our facts be true. Are accredited, educated, intelligent men—or unknown, imperfectly educated and irresponsible persons, the better calculated for purveyors of such facts? We think that every rational, every unprejudiced person can form but one opinion, can make but one reply. Unfortunately, however, the mass of the profession is not unprejudiced, and unfortunately also the state of the medical constitution is such, that until very great alterations be made in it, prejudice and party feeling would turn the honey of Hybla to gall. Such are the demoralizing effects of an effete, and insulting, and pernicious system of medical monopoly, that its supporters, many of them possibly unwilling ones, are slandered and traduced without pity or compassion from the profession in general. Even honourable men have scarcely regretted that the advocates of a system so rotten and repulsive, should pay a sort of penalty for the public offence. We shall return to the subject of hospital reports and reporters at an early opportunity, for we do conceive that both might be rendered more useful to the profession, more calculated for the advancement and improvement of our science than they are at present.

Before we pass to the consideration of Injuries of the Head, we must advert to another point touched on by Mr. Crampton. It is the damnable system of blazoning as glorious and successful, frightful operations, which, in point of fact, end only in sorrow and disgrace. Those who are behind the scenes, who witness the practice of a large hospital, know that these bloody dramas are tragedies at last, and read with such disgust as Mr. Crampton has properly expressed, the lying chronicles of cures that abuse the credulous public. The well informed indeed are not deceived by this Fama mendax, but the mass of the profession are; for those engaged in country and in private practice, who have not the opportunity of witnessing such cruel displays, and cannot therefore contradict by experience and observation the delusive statements that meet their eye, are naturally and necessarily imposed upon. If hospital reports extensively adopted and faithfully executed had no other good result than that of disabusing the professional public of their admiration of bloody operations, they would not be unproductive of essential benefit.

But there is a medical as well as a surgical knight-errantry, if such a term be applicable to the case. The materia medica becomes the physician's knife, with which he also aims at theatrical display. Those engaged in good private practice, and those who witness the results of public practice, soon find how false are many of the powers ascribed to new drugs and old ones. They learn to smile, or, if more sarcastic, to sneer at the miracles effected by iodine, or carbonate of iron, or by any other of the many medicines which enthusiasm, ignorance, impudence, or wit have invested with powers they do not possess. Here again is a field for the hospital reporter; a noble, because an useful opportunity of exposing charlatanerie, sobering enthusiasm, and detecting sophistry. We make no apology for having gone a little to one side in making these remarks; we sincerely believe that were they more attended to by the periodical press, it would execute its mission better than it does. That mission is Truth, and though we are not sufficiently Utopian to imagine that men will forget party, and prejudice, and interest to worship her, yet we believe that in all ranks of our profession there is a fund of good feeling, which, if properly directed by the press, cannot fail to redound to our honour and interest, and place us where we should be, in the van of civilization and intelligence.

Our readers are aware that Sir Astley Cooper and Mr. Brodie are inclined to advocate the application of the trephine in cases of compound fracture of the skull, whether symptoms of compression or irritation of the brain be present or not. It might naturally be imagined that a practice recommended by such authorities, should be very widely adopted in their own country, and, in fact, it is evidently becoming general. In Dublin, however, the lessons of Mr. Dease are still fresh, and continue to influence the opinions and direct the practice of his successors.

"I intimated at the beginning of this paper, that the modes of practice in certain severe injuries of the head, were somewhat different in London and in Dublin. The chief difference appears to consist in this, that in fracture of the skull with depression of the bone, the trephine is less frequently employed in Dublin than in London. In Dublin we conform in general with the rule of practice as originally laid down by Mr. Dease, (who preceded Desault by many years,*) namely, 'in fractures of the skull with depressed bone, *whether complicated with wound of the scalp or otherwise*, no attempt should be made to raise the depressed bone, *unless very decided symptoms be present of compressed or irritated brain.*' In London, on the contrary, the rule of practice seems to be, 'that if the depressed bone be exposed in consequence of a wound of the scalp, the trephine is to be applied to elevate the depressed bone, *whether symptoms of injury of the brain exist or not*;'* either practice may be supported by the most specious arguments, and each has the sanction of the highest authority. It is plain, however, that in this case the question cannot be decided either by argument or authority, but solely by comparative experiments and observations conducted on a very extensive scale. I doubt, however, whether any individual, no matter how extensive his experience may have been, has instituted a sufficient number of experiments, or observed a sufficient number of facts, to establish definitively either of the opposite doctrines. In surgery, as in every thing else, extreme opinions, or opinions which are not qualified by exceptions and limitations, are seldom safe. I own, therefore, that the opinion of Mr. Dease,† qualified as it is by the exception in respect to those cases in which there are symptoms of compressed or irritated brain, has ever exercised a strong influence over my mind, and I may add, over the minds of all those who, like myself, received their earliest surgical impressions from the lessons and practice of Mr. Dease. I am quite aware that early impressions in favour of any particular mode of practice, are extremely apt to influence our opinions in after life, and that 'to seek the testimonies of truth,' (as Cicero beautifully expresses it,) '*ex animis consuetudine imbutis*,' is neither philosophical or safe;—but on the other hand, those who received their first impressions from the lessons and practice of Mr. Pott, are liable to a similar imputation of undue influence, operating in an opposite direction; we can only, therefore, approach to a solution of the problem, by placing in juxta-position, the *practice* of those who in different countries cultivate the same field of inquiry on a great scale, although by different means. The advantage of this method is well illustrated by what has happened within these very few years, with respect to the treatment of syphilis."

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* "Mr. Abernethy is not correct in placing Desault before Dease. Mr. Dease's work on wounds of the head was published in 1778: Desault's thesis on his becoming a member of the College of Surgeons, is dated in 1776, and he was not appointed a surgeon to the Hôtel Dieu, until the year 1788.—*Eloge de Desault, par Bichat.*"

We agree with Mr. Crampton in considering the subject as yet undecided, and that not only do we require more facts, but that, from the difficulties surrounding the investigation, a length of time must elapse ere such facts can be properly collected, and accurately analysed. The question can only be settled by experience, careful observation, and rigid induction. By the way, Mr. Crampton mentions an incident illustrative of the barbarism of surgery, even at so late a period as fifty or sixty years ago. At the commencement of Mr. Dease's professional life, it was the duty of the senior apprentices to go to the hospital at an early hour on every Monday morning, and have all the persons who had suffered fractures of the skull during the festivities of the preceding Sunday evening, scalped, and ready for trephining at the visiting hour. Had such a story been told us by Sir Jonah Barrington, we should not have believed it. We proceed to the consideration of the cases related by Mr. Crampton.

Case 1. *Compound Fracture of the Skull.*—James Fagan, æt. 23, tall and powerful, admitted into Steven's Hospital, at 12 P. M. March 17, 1832, under the care of Mr. Cusack. Half an hour before admission he had received a wound from a dragoon's sword, convex on its cutting edge, over the right parietal bone. When struck, he fell forwards, and lay insensible for five minutes, then leaped up and made a rush at the door, but fell again. He had been drinking previously. On admission he was violent and incoherent—vomited twice—skin warm—pulse 92, and weak. The sword had cut through the bone and membranes of the brain, some cerebral substance appearing on the lips of the wound.

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* "See Sir Astley Cooper's Surgical Lectures in the Lancet. Mr. Brodie's Paper on injuries of the head.—*Med. Chirurg. Transactions*, vol. xiv. p. 412."

† 'The more eligible and rational method of treatment in all those cases, (fracture with depressed bone,) I believe will be, that of not being precipitate in applying the trepan, as long as the patient remains free from symptoms that would indicate the necessity of it, &c.'

On the 18th, he lay as if asleep, moaning and answering peevishly, but often intelligibly when roused and questioned—when much roused he could tell where but not how he received the injury—said he had a pain in his head, and pointed to the wound with his hand—looked like one oppressed with drink and sleep. Surface warmer than natural—pulse 88, small, variable, quickened by any motion—tongue moist, brown in centre—pupils contractile. He had some cough which seemed to distress him, and had vomited four or five times during the night. On changing the dressing much cerebral substance, mixed with blood escaped.

V.S. ad ℥xvj.—*Cal. c jalap. D. febril.*

19th. Vomited after bolus, which has not operated—urine was drawn off last evening, but has been passed this morning—got some sleep. Is more sensible, and reluctantly answers questions—pulse 75, soft, regular—tongue brown in centre. *Enema purgans.*

20th. More torpid—moans frequently, and complains of pain in the head—pupils natural—pulse 55 when quiet, when disturbed 80—no stool. Wound glued together by lymph and pus.

V.S. ad ℥xx. *Cal. c. colocynth. Enema purgans.*

21st. Bowels well opened—less stupor—pulse 68—wound looks clean.

Hirud. xxiv. *capiti. Enema purgans. Calo.* gr. ij. *3tiis horis.*

"He continued much in the same state, but gradually becoming more sensible, until the 24th, when he appeared more torpid, and at 4 o'clock P. M. he had a violent convulsive attack, four men could scarcely keep him in the bed; three hours afterwards he had another fit equally severe, which was followed by great stupor. *As there were now evident symptoms of irritated, and probably compressed brain,* it was determined, in consultation, by Mr. Crampton, Mr. Peile, Mr. Collis, Mr. Wilmott, and Mr. Cusack, to lay bare the wound in the skull freely, and then to act according to circumstances respecting the removal of a portion of the bone. As a considerable quantity of brain had escaped from the wound in the first instance, it was obvious that both tables of the skull, the membranes of the brain, and the brain itself, had been divided by the sword, and it was probable that the inner table of the skull had been separated from the outer, and driven in upon the brain: and such, upon a careful examination with the probe, seemed to be the case. A slip of bone about ¼ of an inch broad, and three inches long was removed from the upper edge of the divided bone, by means of a *straight saw,* about four inches in length; the operation was performed by Mr. Cusack, and was effected in a very few minutes, and with great ease. On removing the slip of bone, it was ascertained that the inner table was detached, so as to form an acute angle with the outer table. Some softened cerebral substance escaped from the wound; he had one slight convulsive attack after the operation, but he soon became much more sensible, and now (four hours after the operation) he lies tranquilly with his eyes open."

At 10 P. M. he had another convulsive attack, but next morning was free from stupor. He complained of pain in the head—pulse 76, small and weak. On the 27th (10 days from the accident) a small red pulsating tumor, the size of a pea, appeared in the centre of the wound. He was ordered bark. On the 28th the fungus was doubled in size, of light purple colour, pulsating slightly; the wound was granulating, the general symptoms favourable. No material change occurred till the 13th of April, when the fungus began to enlarge considerably and to pulsate strongly, he was more torpid, and complained of pain in the head. About the 16th the fungus began to decline rapidly in size, the general symptoms likewise becoming more favourable. On the 20th the fungus had disappeared, and on the 1st May the wound was healed. On the 15th Fagan was discharged, and was able to resume his work as a pipe-maker. His memory was impaired, and when seen on the 20th July it continued so. He had forgotten *words*, not *things*, and told Mr. Crampton that "he knew every thing as well as ever he did, but could not put a name on any thing." Mr. Crampton shewing him a button, he laughed, and said "I know what it is very well, it is a ba, ba, ba,—Och! I can't say it, but there it is," pointing to a button on his own coat.

Mr. Crampton thinks it probable that, had the operation been performed earlier, the result would have been unfortunate, and that had it been performed later, it would have but aggravated the mischief, by irritating parts already in a state of incipient inflammation. This, however, is speculation, and the fact, as it was, is more valuable than Mr. Crampton's belief of what, had it not been as it was, it might have been. The following remark is more to the purpose.

"The convulsions which are caused by *irritation* of the brain, and which, not unfrequently appear shortly after a severe injury of the head, are of a very different character from those which are caused by the disorganization of the brain, consequent on *inflammation*. The first appear to be an epileptic character, and are probably connected with a disordered state of the functions, rather than of the structure of the brain, and are *comparatively* attended with but little danger.

The second usually appear in connexion with strabismus and coma at the termination of the train of symptoms called 'secondary,' from their occurring several days, or even weeks, after the injury has been inflicted, and it is scarcely necessary to add, that they are almost invariably the fore-runners of death."

The fact is that the subject of convulsion after injuries of the head has not been sufficiently investigated. For some valuable remarks on this symptom we may refer to Mr. Brodie's excellent paper. It seems probable that convulsion, as such, is not a symptom of much pressure or even disorganization of the brain. We see it after slight injuries, after depletion without injury at all, and as Mr. Crampton justly observes, it sometimes accompanies other and more deadly symptoms. If Mr. Crampton implies that the convulsion in the latter case differs in kind from the convulsion in the former, we doubt the correctness of his opinion. We have seen no decided difference in the character of the convulsions—the real difference lies in the character of the attendant phenomena. Yet surely this proves, both in logic and in common sense, that convulsion, of itself, is not to be looked upon as a deadly or even a very alarming symptom. We repeat, however, that the subject requires investigation.

Mr. Crampton dwells upon the fact, that an operation may be resorted to with advantage, even after the appearance of symptoms, which, if not relieved, invariably proceed to a fatal termination. In proof of this he cites some cases reported by Mr. O'Halloran, in the fourth volume of the Transactions of the Royal Irish Academy, "a work not usually found in medical libraries." The cases are too short to be further condensed.

Case 1. "Pat. Kelly received repeated blows on the left parietal bone, which produced a very extensive fracture, with a contused wound of the integuments. He went on tolerably well for about ten days: he then became heavy and drowsy; the complaints increased, and when I was sent for, he was comatose, and so much oppressed, that I apprehended an operation would be useless, and had some thoughts of immediately returning; but on reflecting on the great resources of nature, I removed the integuments, applied the trephine, and elevated the depressed bone. Immediately after the operation, he opened his eyes, knew me, and spoke. Eight days afterwards I removed a loose piece of bone of considerable size. The next day he had paralysis of the opposite side: he laboured under this partial paralysis for fifteen days and then gradually recovered.

Case 3. I visited Pat. Hayes, who 13 *days before* had received a blow which made a profound depression on the posterior superior part of the right parietal bone; the pulse was slow and weak, but regular; he was quite comatose, and could not articulate. The bone was crushed into bits, and was driven in upon the brain, wounding the dura mater in some places. By means of the probe, forceps, and elevator, (without the trephine,) I relieved the dura mater of all incumbrance. In some time the dura mater rose to its natural height; the diseased parts sloughed off, and he recovered."

To shew that extraneous matters may frequently be left in the brain for some time without injurious consequences, Mr. Crampton relates an interesting case, that of Mr. Henry Brougham, nephew of the present distinguished Chancellor. Mr. Brougham, then 18 years of age, received the contents of a fowling-piece obliquely in his forehead. He was bled by a country surgeon, and soon afterwards seen by Mr. Crampton. He was perfectly sensible, and had a faint recollection of the manner in which the accident had happened. The eyes were closed by the swelling of the eyelids and cheeks—the principal wound occupied the centre of the forehead; it was circular, above two inches in diameter, and nearly an inch in depth, the bottom pulsating, and covered with a mixture of coagulum, disorganized brain, fragments of bone, and some of the wadding of the gun. Mr. Crampton attempted to clear the wound of the extraneous matters lodged in it, but scarcely had he touched with the forceps a large fragment of bone, when the whole body was convulsed and he moaned deeply. Mr. Crampton then merely attempted to cleanse the wound with tepid water. The patient instantly cried out that the sensation was dreadful. Mr. C. then gave up all attempt at even washing the wound, and merely covered it with a piece of soft lint. The treatment consisted in leeches daily to the forehead and temples—iced water to the head—attention to the bowels—starvation. The local treatment was equally simple. The discharge contained, for several days, much softened brain, mixed with blood, but the wound itself was not washed for twenty-two days, and then nothing more was done than to lift off the small fragments of bone as they became detached by the natural process. The wound was healed in two months, but small spiculæ of bone were occasionally discharged for a year afterwards. The cicatrix was deeply depressed, and pulsated. Mr. Brougham resumed his collegiate studies, graduated, and became a valuable clergyman. We are informed that Mr. Crampton's reports are to be continued. We hope that they will be so; and we beg to hint to Mr. C., that the profession will expect from him some of the many interesting *facts* that must have fallen under his observation.

XXXVII.

Clinical Reports of the Surgical Practice of the Glasgow Royal Infirmary. By John Macfarlane, M D. senior Surgeon to the Royal Infirmary of Glasgow, &c. Octavo, pp. 314. Glasgow, 1832.

Clinical reports, in one shape or other, are pouring in upon us. We hail this as a good sign—good for the science—good for the profession. Having made some remarks upon the subject in another article, we shall not go over the ground again. Dr. Macfarlane's short preface will shew why he has been led to publish these clinical reports, and will shew, at the same time, why other surgeons or physicians, with equal or greater opportunities, should follow his example.

"Having ceased to act as one of the attending Surgeons of the Glasgow Royal Infirmary, it occurred to me that a plain and candid Report of the unsuccessful as well as of the successful cases, which had been under my care in that Institution, might be useful to the numerous classes of students who attended me in my daily visits, and, probably, not unacceptable to some of the junior members of the profession. The short time that has elapsed since this resolution was formed, the pressure of other important avocations, and my anxiety to have the work completed as soon after the termination of my attendance as possible, are the only apologies I have to offer for so hurried and imperfect a performance. I have endeavoured, however, to give a faithful detail of all the cases of importance, appending to them such observations as they naturally suggested: and, at the same time, I have made an unreserved disclosure of all the adverse occurrences which I have met with in Hospital, and, when the subject admitted of it, even in private practice. All the operations which proved fatal are candidly recorded, and the causes of failure pointed out, from a conviction that by such details science is more likely to be benefited, and the surgical student improved and instructed, than by merely disclosing the '*cures*,' however numerous or brilliant.

These Reports embrace but a very limited period; they include, however, the whole time of my attendance as junior and senior surgeon, viz. from 1st May to 1st August, 1826, when only one surgeon officiated, and the attendance was limited to three months; from 1st November, 1826, to 1st May, 1827, when the period was extended to six months, and two surgeons acted; and from 1st May, 1831, to 1st May, 1832, when the time of attendance was increased to one year, which arrangement is at present followed.

It cannot be denied, that the public at large, by whom our Hospitals are so munificently supported, and especially the medical world, are entitled to look to the Physicians and Surgeons of such establishments for the results of their experience, whether fortunate or adverse, in the shape of a periodical publication. Were such documents regularly furnished by the attendants of British hospitals, as is occasionally done upon the Continent, and thus made available to the profession, a mass of invaluable materials would be soon accumulated, which would far exceed in value and importance all the isolated papers and cases with which the journals of the day abound. It is not, however, in the power of the surgeons to the Glasgow Infirmary to furnish any thing like an extensive Report, the period of their attendance being so limited as to prevent any single individual from obtaining that ample experience, or making that extended series of observations, which close and assiduous practice in an hospital for years can alone render important. Nevertheless, it is their duty to communicate the results of their experience, limited though it be; and should they not be able to give to the public much that is interesting or valuable, they may at least show that they have not been inattentive to the duties of the important office to which they have been appointed."

The volume before us is rich in facts, and those of the kind which we require. We have failures presented as well as successes, and the profession can judge of surgery as it is, and not as vanity would wish that it should be. It is such men as Dr. Macfarlane who are calculated to serve the real interests of truth, and to raise the moral character of the profession. How noble a contrast does his plain and manly conduct present to that of the shuffling advocates of a special remedy. The present Number of this Journal will afford discerning men the means of comparison. We shall lay this volume under an embargo, in order that we may rifle it of its valuable contents. Dr. Macfarlane will be pleased to see his cases made far more extensively useful, than the limited circulation of a medical monograph could possibly permit. As the book is a mass of arranged cases, we are not tied down to an analysis or a review, but may suck, at our convenience or caprice, the honey from its numerous and varied flowers.

I. Lupus.

"This disease is met with in two different forms. The first and most common variety commences in a slight papillary enlargement of one or more of the sebaceous glands and follicles of the nose, cheek, or lip, which parts soon assume a dark red or livid colour. They are at first indolent, but gradually become itchy and painful, ulcerate on the surface, and discharge a thin ichorous fluid, which, on exposure to the air, becomes concrete; thus forming, over the whole affected surface, crusts or scabs of a yellowish or dark brown colour. These soon separate, and new ones are reproduced; and if the disease is not checked, it gradually extends, and more complete ulceration ensues, by which the original characters of the affection are modified, and in some measure obscured. The ulceration, however, is generally superficial, being rarely deeper seated than the skin, or accompanied with much swelling of the surrounding soft parts; and it seldom produces the ravages or deformity of the second species, which I shall now shortly describe. The sebaceous glands and follicles are here also the seat of the disease; but in general there is only one tubercle, which enlarges slowly, assumes a purple or violet colour, has a broad, firm, and indolent base, and presents many of the characters of a small carbuncle. This lupoid tubercle is slow in its progress, and may remain for a considerable time discoloured and indolent before ulceration takes place. In one case that came under my notice, the tumour, which was the size of a walnut, resisted every kind of treatment, for fourteen months previous to the occurrence of ulceration. When this process does commence, however, it spreads deeply, and produces great destruction of the soft parts, as well as of the cartilaginous and bony structures with which it comes in contact. I have seen the nose, the upper and lower lips, the cheek and the right eye, completely destroyed by it, with the nasal, and a portion of the superior maxillary bones."

Case 1.—*Lupus affecting the Nose, &c. cured by Arsenic.*

C. M'K., æt. 9, was admitted into the infirmary on Jan. 4, 1831, under Dr. Perry. On the 1st May she became the patient of our author. The upper lip, and apex and alæ nasi were covered with yellowish scabs, under which the ulcerated surface had a florid papillary appearance, and discharged a thin matter; a part of the septum and alæ nasi was destroyed.

There was some difficulty of swallowing from great swelling and irregularity of both tonsils, which were much thickened, superficially ulcerated, and tuberculated; the uvula also enlarged, adhered firmly to the left. The ointment of the iodide of mercury had been used for several weeks without advantage. A solution of the white oxide of arsenic in water, grs. vj. to the oz., was ordered to be applied to the ulcerated surface twice daily, was continued for several weeks, together with small doses of Fowler's solution of arsenic internally. The parts cicatrized several times, but in a few days the ulceration returned. At length two applications of the actual cautery, followed by the arsenical lotion, produced a more permanently healthy action, and she left the infirmary cured on the 17th September.

"I have great faith in arsenic as a local application in lupus, and am in the habit of employing it for two different purposes. When used as a stimulant, it must be applied in solution, but when an escharotic effect requires to be produced, the white oxide mixed with an ointment, or made up in the form of paste, is laid over the affected surface. Dupuytren has frequently observed, that when the arsenical paste is applied to lupous ulcerations, extensive erysipelas of the surrounding integuments is not unfrequently produced, and he therefore prefers applying the proto-chloride of mercury in powder, which he says is free from this objection, and gradually but steadily changes the morbid state of the parts, acting more as a specific than a caustic. Although I have never seen the arsenical paste give rise to erysipelas, yet in two cases in which the ulcerated surface was extensive, its application was followed by severe inflammation of the gastro-enteritic mucous membrane, apparently in consequence of its absorption into the system; and in another case, the slough which it produced penetrated so deeply as to expose the cartilage of the nose, a portion of which exfoliated. When, however, the diseased surface is small, and the lupus exists in the form of tubercle, the arsenical paste may be employed, not only with safety, but also with marked advantage, for it destroys the ulcerated surface and the surrounding induration more completely than can possibly be effected by applying it in solution. But in every other state of the disease, the latter formula is the safest and most efficient,—its strength being so regulated as to produce either a stimulant or escharotic effect. I have employed it for the latter purpose in several cases, and have never seen the most concentrated solution, even when applied to irritable and extensive surfaces, produce local mischief or constitutional disturbance.

The other stimulating applications which I have employed with most advantage, are the actual cautery, and a solution of mercury in strong nitric acid. The red-hot iron has a powerful effect in changing the morbid action, producing healthy granulations and speedy cicatrization. I have employed it in several cases of lupus with decided benefit, and am in the habit of doing so with similar good effects in other forms of ulcer, both indolent and irritable. I have only once employed the '*nitrate acide de mercure*,' which Richerand and Cloquet have found so frequently useful when other applications had failed. It produced a slough, which was three times removed, when a cure was accomplished. In this case the right nostril was nearly shut up by an enlarged, ulcerated, and granular state of its mucous membrane. This diseased state was removed, and occlusion of the external aperture prevented by the introduction of sponge."

In the following case the obstruction of both nostrils was complete, and the deformity required removal by an operation.

Case 2.—*Lupus affecting the Nose, &c. and producing obliteration of the Nostrils—removed by an operation.*

W. M., æt. 18, was admitted March 21, 1826, under Dr. Young. The disease had commenced 18 months previously on the nose, cheek, and centre of the upper lip, by dark redness, tumefaction, and itchiness, slowly succeeded by ulceration; the parts then becoming covered with thick yellowish-green or dark brown scabs, extending along the septum nasi, and accompanied with a purulent discharge from the nostrils. Three applications of the actual cautery and the use of resinous ointment seemed to effect a cure; but on the 1st of May, when Dr. Macfarlane took charge of the case, the diseased parts were covered by a delicate, smooth, and shining cuticle, and were elevated, irregular, and apparently unsound. In a few days ulceration recommenced, scabs forming, dropping off, and being speedily renewed. Under the arsenical lotion and Fowler's solution internally a gradual improvement took place, and the patient was dismissed cured on the 26th June. On the 24th August the disease re-appeared after the reception of a smart blow on the nose. On Feb. 16, 1827, he re-applied at the infirmary. The external parts were healed, but the opening into both nostrils was completely obliterated by the firm union of the alæ with the septum. The adhesions, which were firm and extensive were divided by a narrow bistoury, and sponge tents were afterwards introduced. When these were discontinued the parts healed under the application of the nitrate of silver.

"Although lupus may be purely local in its origin, yet it sometimes happens that its continuance is prolonged, and the cure materially impeded by constitutional causes. I have seen, both in the Infirmary and in private practice, several children labouring under this disease, who had been subject for years to psoriasis, tinea capitis, or other cutaneous complaints. It has been also observed to prevail most obstinately among those of a scrofulous diathesis, especially while labouring under enlargement of the lymphatic glands, affections of the bones, chronic ophthalmia, tabes mesenterica, &c. According to M. Rayer, it has been at times particularly prevalent among the poor in some parts of France, from scanty and unwholesome nourishment; and in this city, during the years 1818 and 1819, when the working classes were exceedingly ill fed, I had occasion to see a greater number of cases among the poor in the district which was then under my care than at any former or subsequent period. These facts are sufficient to shew the necessity of combining constitutional with local treatment. With this view I generally order Fowler's solution of arsenic in small doses; but I have sometimes found it necessary to prescribe the muriate of mercury, dissolved in a bitter tincture, such as that of cinchona, colomba, or gentian, so as to produce a mildly-alterative effect."

CASE 3.—*Tubercular Lupus mistaken for Cancer, cured.*

W. P., æt. 44, was sent from the Highlands to undergo an operation for cancer. On the 14th June, 1826, the following was his condition. Two inches of the central portion of the upper lip were destroyed by ulceration—the sore looked angry—its edges were thin and ragged—its surface irregular, and covered by a greyish secretion through which small purple granulations were visible—the discharge was bloody and fetid—and the surrounding integuments were livid, indurated, and the seat of darting pains. The nose was covered with a number of small, prominent tubercles, to the apices of which were attached hard yellowish scabs. The disease had existed for nearly two years, ulceration having occurred eight months after the first appearance of the tubercle in the lip, during which time several of the lymphatic glands on both sides of the neck became enlarged and painful. The arsenical lotion was used by Dr. Macfarlane, at first as an escharotic and afterwards as a stimulant, whilst small doses of the hyd. mur. were given so as to affect the gums. By these means the morbid action of the parts was arrested, and in less than two months a complete cure was effected. Though much of the lip was destroyed, yet, as granulations formed, the parts were gradually approximated by means of sticking plaster and a double-headed roller, and ultimately re-union took place with but little deformity.

"Sometimes the progress of a lupoid tubercle may be arrested, and its ulceration prevented, by the application of leeches around its base, especially when the tumour is painful and covered by inflamed integuments. This followed by evaporating lotions, and alterative doses of calomel, will not unfrequently subdue the inflammation upon which the progress of the disease depends, and reduce it to that indolent and chronic state, in which friction, with an ointment containing the ioduret of zinc or mercury, may be beneficially employed to promote its absorption."

We have given all the cases of lupus related by Dr. M. as well as the practical remarks accompanying them, because we know how important it is to understand the treatment of this most distressing complaint. We might offer some observations of our own, but as we are anxious to place before our readers as much as possible of the valuable matter contained in the present volume, we will not stop to indulge in any. We will merely say this, that in lupus, as in other maladies, the practitioner must not neglect the general principles which regulate all treatment, even the most specific. He must see what is wrong in the general health, and endeavour to set it right, and he must recollect that the state of the parts in lupus is liable to variation. Occasionally we find them inflamed—occasionally indolent. When scabs form it is better to apply a light bread poultice until they are separated, and then resort to the applications determined on.

II. LUMBAR ABSCESS.

Dr. Macfarlane remarks that lumbar abscess has become a more manageable disease since the general adoption of Mr. Abernethy's practice—that of opening the tumor frequently by a small puncture, healing the wounds, and allowing the sac to contract. This perhaps is not so certain as Dr. Macfarlane imagines, indeed we suspect that at present Mr. Abernethy's method is rather declining in general estimation. At St. George's Hospital, for instance, where free openings, and punctures, as recommended by Mr. Abernethy, have been tried extensively and compared together, the latter are nearly abandoned. Mr. Brodie, whose opportunities have of course been great, and who has paid no inconsiderable degree of attention to the subject, prefers free openings and the subsequent application of a poultice, in order that the matter of the abscess may drain out. Mr. Brodie has been led to give a preference to this practice from having observed that, after closing a small wound, the contents of the sac became putrid under the admission of a little air, when sulphuretted hydrogen gas was generated, and the usual remarkable symptoms of a putrid abscess ensued. We remember, ourselves, having witnessed a case of this description. A patient had psoas abscess, which presented in the thigh. It was opened, but at this moment we do not remember how, and after the puncture the wound closed. On the next or ensuing day peculiar symptoms of prostration with fever of a typhoid character set in. The wound was immediately broken open, when coagula of blood that had been locked in and putrid gas escaped. We believe that the patient died. But we return to Dr. Macfarlane.

Dr. M. observes that before puncturing the cyst, which, it will be recollected, he does in the Abernethian manner, he has derived much advantage from establishing an issue over the lumbar spine; he has also irritated the depending part of a lumbar abscess by the moxa, when, from non-adhesion of the puncture, there was reason to fear that inflammation of the cyst would supervene, and this has been attended in several cases with decided advantage.

CASE 1.—*Lumbar Abscess successfully treated by Issue, Moxa, and repeated puncturing.*

W. J. æt. 18, admitted July 14, 1826. The abscess presented below Poupart's ligament on the left side. He complained of pain in the left iliac and lumbar regions, but no tenderness, nor alteration of the spinal column could be detected. He was of strumous aspect—his strength reduced—there were frequent dry cough, hurried breathing, and night sweats—he could not stand erect, or walk without keeping the trunk bent forward at a considerable angle—pulse 120—pyrexia. The tumour had been first observed at the upper part of the thigh five weeks previously, but for several months he had been subject to pain in the back, and weakness of the limbs.

"A small caustic issue was formed on the left side of the spinous process of the second lumbar vertebra; and after the eschar had separated, and the discharge was established by the insertion of peas, the abscess was punctured, and about eight ounces of well-matured pus (being apparently about two-thirds of its contents) were evacuated. The edges of the wound were brought accurately together, and adhesion effected. He was allowed a milk diet, with a small quantity of wine, and six grains of quina daily; his strength and appetite gradually returned, his pulse fell to eighty in the minute, and the diarrhœa and perspirations ceased. The sac was punctured again in ten days, and the wound closed; but, on repeating this operation for the third time, about a fortnight after, adhesion did not take place; there was, therefore, a daily discharge of pus from the opening for about three weeks, when it completely closed. On the third day after the last puncture was made, he had a rigor, which was followed by pain in the lower part of the abscess, and by a fetid and brownish-coloured discharge. The application of a moxa over the most depending part of the cyst, and of another over Poupart's ligament, checked these symptoms, and restored the purulent secretion to a more natural appearance."

The following case is one of not very unusual occurrence.

CASE 2.—*Lumbar Abscess—Diseased Spine not discovered till after death.*

A. S. æt. 22, admitted Dec. 13, 1826. A large abscess presented under Poupart's ligament on the right side. No disease of the spine could be detected. The patient was feeble, with little pyrexia. The tumor had been first observed seven weeks previously, but he had been out of health for nearly three years, when his left leg was amputated for scrofulous disease of the knee-joint. Three moxas were burnt over the lumbar spine, after which a pound and a half of curdy pus was evacuated by puncture. The wound was closed before more than two thirds of the contents of the sac had escaped. In two days he had a rigor, followed by pyrexia, and pain in the tumor. On the 19th the bandage was removed, and a pound of flaky pus escaped from the opening. Before the tumor was more than half emptied the wound was again closed, and compress and bandage applied. On the 21st three pounds of pus were discharged; he had now acute pain in the left side of the chest with dyspnœa, and rapid feeble pulse. The pain was removed by local bleeding and fomentations, but vomiting, diarrhœa, and aphthæ came on, the discharge became brownish coloured, fetid, and mixed with air, and he died on Jan. 7.

Sectio Cadaveris. The cavity of the abscess extended from the right side of the spine close to the diaphragm, along the psoas, to the middle of the thigh. The sac was thickened and of chocolate colour, its surface in some places granular, and covered with lymph; through its posterior wall was a small opening, opposite the upper edge of the sacrum, and extending to the two inferior lumbar vertebræ, which, together with the articulating surface of the sacrum, were carious; a considerable portion of the intervertebral cartilage was destroyed.

It is not an uncommon circumstance for the spine, or the bones of the pelvis, to be extensively affected, without any symptom to excite suspicion during the life-time of the patient. The fact is, that a large abscess in the loins, lower part of the belly, or upper part of the thigh should, of itself, lead a surgeon to *suspect* diseased bone. We have formerly related a case of extensive disease of the thoracic vertebræ, in which the patient complained only of pain in one hip-joint. In this case there were carious ribs, and two ulcerated openings in front of the chest led to the affected bones. This patient died of inflammation of the pleura. We lately saw another instance of extensive disease of bone, unaccompanied with prominent symptoms. The patient was an old man, of sallow, unhealthy aspect, and presented himself with chronic abscess of the upper and posterior parts of the thigh, much below Poupart's ligament, and apparently unconnected with it. The tumor was punctured twice, and after the second opening symptoms of inflammation of the interior of the cyst, with secondary hæmorrhage, ensued. He died. On examination, the cavity of the abscess was found to be enormously large, and extended up under Poupart's ligament to the cup of the ilium. Here the whole surface of the bone was bare and rough, and there was also disease of the sacrum and lower lumbar vertebræ. The abscess had only been observed for two months, and up to the patient's first application he had walked about.

Diseased bone, in these cases of large abscess, is frequently not only not suspected during life, but even overlooked after death. Mr. Brodie has remarked, that a small opening occasionally leads down to exposed or carious vertebræ, which opening may be, indeed has been, overlooked. Surgeons, in their examinations, should be careful to attend to this hint of Mr. Brodie's, or they may unwittingly deceive themselves and others. At the same time, there can be no doubt that large abscesses do occasionally form in the neighbourhood of the psoas, the lumbar, the glutæal, and the abdominal, as well as other muscles, independent of any affection of bone. The cellular membrane is, we know, extremely liable to suppuration, and there is no good reason why this tissue should be exempt in the situations alluded to. Every practical surgeon will agree with us, in believing that an accurate knowledge of the various abscesses that present about the groin and inguinal region is of great importance. Before we pass to the relation of another case, we must express our surprise at the rapid manner in which some of these enormous abscesses are cured, or seem to be so. We lately saw a patient with a very large abscess in one natis; it was punctured, and nearly 40 ozs. of pus discharged; filled again, and was again opened, no precautions being taken to close the wound. The patient who was reduced to death's door, acquired flesh and strength under generous diet and bark, and the opening, which at first seemed inclined to be fistulous, healed. No exposed bone was at any time discovered. Dr. Macfarlane gives a fatal case of lumbar abscess, which is interesting, as it shews the kind of symptoms that occasionally follow the operation of puncturing.

Case 3. *Lumbar Abscess—fatal Irritative Fever and Effusion on the Brain after Puncture.*

W. D. æt. 12, admitted Dec. 28th, 1826. There was a lumbar abscess projecting from the inner and upper part of the left thigh, and nearly as large as a child's head. There was fixed pain in the lumbar spine, increased on pressure and motion, especially at the lower part, where two spinous processes projected, and the integuments were thickened and painful. Several inguinal and cervical glands were enlarged. The tumour had appeared five weeks before admission, but he had suffered under pain and weakness of the back for some years.

A caustic issue was applied, and, on the 2d Jan. a puncture was made. The wound did not heal; and, on the 4th, the bandage was removed, and 12 ozs. of matter escaped. In the evening, there was a slight rigor, followed by pyrexia and acute pain in the lumbar spine. For several days, the pulse was from 120 to 140—the skin hot and dry, with vomiting and hiccup—flushed face—hurried breathing—typhoid sordes on the tongue and teeth. There was no pain in the abscess, the discharge from which was diminished, and more like whey than pus. The pain in the spine became so excruciating that he could not bear the slightest motion—he was occasionally delirious, and died comatose on the 19th.

"On inspection, the cyst was found to be considerably larger and more extensive in the abdomen than exterior to it, and to extend from above the origin of the psoas muscle to the middle of the thigh. It was free from inflammation, and covered by curdy matter, which adhered firmly to its inner surface. The lumbar vertebræ were curved to the left side, and the three inferior bones carious, and surrounded by pus. The intervertebral cartilages were ulcerated, and an incipient psoas abscess, about the size of an orange, was discovered on the right side of the spine. That portion of the spinal marrow enclosed in the affected bones was softened, the brain was in a state of congestion, there was effusion under the arachnoid membrane, on the surface of the hemispheres, and each lateral ventricle contained about half an ounce of limpid serum."

We shall return to the rich harvest of facts presented in this volume, and we hope to glean many instructive cases from its pages.

XXXVIII.

AFFECTIONS OF THE HEAD PRODUCED BY QUININE.

Quinine was found to produce some remarkable affection of the head, in almost every case in which it was administered at Jubbulpore, in 1829. In one officer it caused transient deafness; in another vertigo; in a third intolerance of light, to such degree, that the medical men were alarmed lest effusion on the brain should take place. A fourth European was subject, for a short time, to much confusion of ideas, and all sorts of chimeras after taking Quinine. A Portuguese was affected with tinnitus aurium, and deafness. In all these cases, the Quinine acted favourably on the fever, for which it was administered. In the same note, favourable mention is made of the efficacy of Rohena Bark (Swietina Febrifuga) in fever cases; but large doses of that remedy were also found to produce vertigo.—*Calcutta Transactions, Vol.* V.

XXXIX.

Reported Diuretic Properties of Lichen Vulgaris.

The Lichen Vulgaris, is found in abundance at Bangalore and Trichinopoly; its Tamul name is Kull-pashie; and its decoction in milk is used by the natives in that part of India, as a diuretic; but they are not acquainted with its efficacy when applied as a poultice over the loins. Dr. Stevenson recommends the Lichen to be boiled in water, and bruised in a mortar; it is then to be applied over the region of the kidneys, as a poultice, and renewed twice a day: using at the same time only laxative medicines, when requisite. Dr. S. mentions the case of a man, who had suffered for many months from dropsy, his abdomen being very tumid and undulating; urine scanty; extremities œdematous; countenance bloated, and skin harsh and dry. A poultice of Lichen Vulgaris was applied over each kidney, and produced its diuretic effects so freely, that a quart of urine was voided every second hour, to the interruption of rest. In ten days, the circumference of the man's belly had decreased a foot: the dropsy was cured, and the man's health restored. The remedy was used in July, 1829, and the patient remained well when last heard from, 16 months after. The 2d case was a Dragoon, who had Anasarca, the symptoms of which were speedily removed, but the disease returned, and the man died; when the dropsical symptoms were found to be connected with disease of the heart. Dr. S. knows of the Lichen being used in a third case, with benefit; but the patient was not under his care, and used other medicines at the same time; therefore, the effects of the remedy might be doubtful in that case. The Lichen Vulgaris is commonly found in the Deckan, growing on rocks, and the lower branches and denuded roots of the larger trees.—*Ibid.*

XL.

Cases of Abscess of the Liver.

The following three cases of abscess of the liver are to be found in the Transactions, from which the two preceding articles are taken. They were communicated by the Medical Board of Bengal, and are not devoid of interest.

Case 1. The patient was an European, 21 years of age; a man of steady, good conduct, and respectable connexions. He had appeared for a long time in delicate health, and depressed in spirits, but had never been in Hospital for any affection of his liver; nor was he known to have made any complaint of pain in the side, until within three days of his admission into Hospital, on the 14th September 1830. At that time he suffered from Pyrexia, and acute pain across the stomach, increased by pressure. The pulse was strong and rapid, but subdued by a bleeding of only 1℔ after which 12 leeches were applied. He was further treated by active purgatives, calomel, and antimonials, and had a blister. The patient had a severe rigor on the 15th September, which, by his account, was only the 5th day after he first felt the pain at the Epigastre. On the 19th September fluctuation was evident between the ensiform Cartilage and Umbilicus; and on the 20th, in the afternoon, a large quantity of matter, coagulated blood, and sloughs, were passed by stool. The pulse before this had hardly ever exceeded 100; it now became very frequent and weak, and the patient sunk rapidly. The fluctuation at the Epigastre was so very evident on the 20th, that the Surgeon was induced to make an opening into the tumor with a lancet, by which some pus escaped; the patient experienced no relief from this operation; but sunk gradually, and died on the morning of the 22d. On dissection, the liver was found much enlarged; the right lobe gorged with blood, and softened; the left lobe is described as one large abscess, from which an opening had taken place into the colon: and the liver was adherent to that intestine.

The reporters observe that matter had probably formed before the patient's admission into hospital on the 14th. But it must be remembered that the first rigor was on the 15th, and the patient had only been ill for five days. The case certainly shews the intractable nature of acute hepatitis, unless early and actively treated.

Case 2. This patient, also an European, aged 26 years, had an attack of fever on the 14th May, 1830, brought on by, or at least preceded by drunkenness; the fever continued for a week, with slight occasional exacerbations; the head chiefly affected: he was purged by calomel and salts, and kept on low diet. On the 21st May he had pain in right side, and "quick pulse," but cool skin; was bled to 1½℔ with very little benefit. On the 22d, symptoms being unabated, he was again bled to 20 ozs. and in the afternoon 30 leeches were applied to the right side, whereby the pain was moderated, but not removed. Purgatives, with calomel and antimonials, were employed daily, and the mouth affected by the mercury. On the 24th, pain of right shoulder is mentioned, and the pain of side was gradually increasing, until 27th, when 30 leeches were again applied to the side, and repeated on the 28th, by which his strength was reduced, and he is stated to have "fallen down in a fit;" however, the pain of side was not removed. Purgatives were used daily, and on the 29th he was ordered tartar emetic, ¼ of a grain, every 2d hour. On the 31st May, oppression at chest was felt; and he had a caustic issue to the side. On the 2d June, pulse was observed to be 112. And on the 4th, the side is reported just the same, in respect to pain. One drachm of nitric acid was now prescribed in drink, daily; and the patient was purged with extract of jalap. On the 9th and 10th the pain of side somewhat alleviated, and he took aperients of rhubarb and ginger; or of salts and infusion of Cheraytta, for some days. On the 10th June there was an increase of pain in the side, affecting the respiration, and a small quick pulse; the skin cool. He was bled to 18 ozs. with some relief, and purged by extract of jalap and senna mixture. After this, purgatives, with tartar emetic, were used almost daily; and occasionally a small dose of blue pill, the pain in side and shoulder never being entirely removed, and often becoming severe. On the 27th July, at night a sense of suffocation came on, and a copious expectoration of "phlegm;" the pulse becoming rapid, and respiration hurried; the gums were still tender, and remained so for several days; by this time the patient was much debilitated, but the pain of side moderated. On the 1st August, the Sputa are described as matter tinged with blood. There was great pain in right side of chest on the 5th August, not alleviated by V. S. to 14 ozs. Colliquative Diarrhœa took place on the 15th September, under which, and an extensive suppuration of the liver and lung, the patient sunk, and died on the 30th. On dissection, a large abscess of the right lobe of the liver was found, with an opening into the lung.

The reporters observe that the inutility of bleeding at long intervals, and of salivation as a preventive of abscess of the liver is evident in this case. There was no rigor; the communication of the hepatic abscess with the lung was sufficiently distinct.

Case 3. This occurred in an European soldier, and terminated in abscess; the patient's age, and period of residence in India, are not mentioned. He was a man of intractable disposition, who obstinately resisted a sufficient course of depletion by V. S. in the early stage of the disease, and was detected afterwards in using an unauthorised quantity of animal food; nevertheless, the progress of the disease was in many respects interesting, and illustrative of those points to which practitioners have to direct attention in the treatment of acute hepatic disease. The patient was 76 days in hospital, being admitted on the 14th of August, with Pyrexia, and pain in the right side, and at top of right shoulder: he was bled to 24 ozs. on that day; 30 leeches were applied on the 16th; V. S. was repeated to 20 ozs. on the 18th; and again to 20 ozs. on the 19th: on the 20th 30 more leeches were applied. The medicines consisted of a saline purgative on admission; after which calomel, gr. v. with pulv. antimon. gr. ij. were given three times a day. On the 21st, these medicines were repeated every three hours, and severe salivation occurred on the 22d: the sore mouth was kept up afterwards for a long time. Still the symptoms indicating the progress of hepatic abscess slowly advanced, proving how little can be trusted to salivation, as a means of arresting the progress of acute liver-disease. The loss of life in this instance, seems to have been owing to the patient not permitting the repetition of blood-letting sufficiently *often, and at short intervals, at the commencement of his illness.* The frequent repetition of blisters, at a very early stage of the disease, is evidently shewn to be of no avail, in making up for the deficiency in depletion by blood-letting, during the acute stage of hepatitis; for this man was blistered on the 16th, 20th, and 22d August, without benefit. Three weeks before death, the ribs on the right side were observed to be heaved up, and symptoms of the encroachment of the tumid liver on the chest became more evident; issues were then put in the side, but without benefit; irritation and debility increased for 14 days, and were followed, when the abscess opened into the cavity of the chest, by oppressed and hurried respiration, rapid pulse, hectic fever, obscure rigors; and ultimately by diarrhœa; under which the patient sunk, without having expectorated any matter. Latterly, the treatment consisted of mineral acids, quinine, mild aperients, and anodynes.

The most constant symptoms during the early part of this man's illness, were frequent pulse, morbid heat of skin, and pain in the right side; afterwards a sense of weight in the side; subsequently attended with faintness, and pain in front of shoulder, with numbness of the arm and thigh.

On dissection, an enormous abscess of the liver was found to have made its way through the diaphragm, into the right cavity of the chest.

These cases certainly deserve to be recorded.

XLI.

CASE OF BITE FROM THE KARRAIT SNAKE.

THIS case was communicated by Brigadier Wilson, who watched and treated it with much care and some dexterity. As the narrative is brief and very interesting we shall use the narrator's own words. The details exemplify well the action of an animal poison extremely virulent, yet not sufficiently intense to destroy a man.

"June 10th, 1829.—Reached home from the lines of the 12th Regt. at about five minutes past 10, p. m. The bearers were carrying away the empty palkee, when one of them who had taken off his shoes trod on a Karrait* snake, which bit him just above the great toe of the right foot. On the man's calling out that a snake had bitten him, I took up a candle and a stick, and went out and killed the snake; it was, I think, a full grown Karrait, though I have seen larger ones; it was about two feet three inches in length, and was much more active than those I have generally seen. As the snake was within thirty yards of the house, it did not take me three minutes to kill him. The man who was bitten, did not seem very much alarmed at first, but in less than five minutes he was very much so; he became quite insensible in less than ten minutes after he was bitten; he sunk down, was unable to move, and appeared like a man quite drunk, except that he made little noise: his pulse was rather faint and irregular, and he breathed hard. I should have said, that as soon as he was brought to the house, which was in ten minutes after he was bitten, I gave him a tea-spoonful (about sixty drops) of Eau-de-luce, in a glass of water; he easily drank it, and I also rubbed some of the same on the bite. I continued to apply hartshorn, till about half-past 11, or quarter to 12. I had nearly emptied my Eau-de-luce bottle in the morning on another man, my surwan, and had to send to the Sudder for more, upwards of a mile off, in a dark night; and I feared the man might die for want of medicine: I therefore gave him about two tea spoons-full of hartshorn, of which I had plenty. I think that the hartshorn did as much good as the Eau-de-luce. The man had no difficulty in swallowing, and was perfectly in his senses at 11 o'clock, though he complained of great pain in his foot, and seemed very uneasy. At half-past 11 the part about the wound was very raw, all the skin having come off, (from rubbing, I suppose;) he could sit up and complained much; the leg was quite cold, and mottled black here and there, some way above the ancle: he was very sleepy; his pulse was regular, but rather slow, and weak. About midnight I had his foot put in water, as warm as he could bear it; and hot towels were put on his leg, which was well rubbed for two hours. I also gave him about 12 grains of opium, dissolved in Eau-de-luce, and put into a glass of brandy to rub to the part. The man was pretty easy at 2 o'clock, and at 3 I allowed him to go to sleep, which he seemed much to require. The thin blood continued running from the wounds, particularly those caused by the snake's two upper teeth, which seemed to have done all the mischief; they were much larger than the others. Up to 3 o'clock there was no symptom of swelling in any part of the foot or leg; which continued quite cold, and mottled with black. The man, a stout young Cahar, was much better the next morning, at 8 o'clock, when he got up; but his leg was terribly swollen up to the hip; there was pain all the way up, but not very severe; blood (very thin) ran out of his nose and foot all day, and a great many blisters arose below the knee and all over the foot: as these grew worse, and burst, they turned into bad sores. I had two poultices put on every day, and the pain and swelling came gradually down in about three weeks: the sore is now nearly well; all the blister-sores, except one above the fourth toe, are healed. I gave the man plenty of meat (flesh), and a glass of brandy and water, under the name of physic every day. Perhaps the effects of the bite would have been less sudden, had not the man's blood been in rapid circulation at the moment he was bitten by the snake. He must have been heated, as I had come upwards of a mile in my palanquin, and he was under the pole when I arrived at home. It is now upwards of a month since the above circumstance took place, and I state from recollection the steps that I took to cure the sufferer. Dr. Eckford, of the 12th Regt. was so good as to tell me how to treat the man subsequent to the bathing of his leg in hot water, at 12 o'clock on the night of the accident."

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* Supposed to be the Karetta, plate 26, page 32 of Russell's work on Indian serpents.—W. T. *Secretary Med. Soc.*"

XLII.

NATIVE LITHOTOMISTS IN INDIA.

THE Celsian operation, "by the gripe," would seem to be the rudiment of a scientific and successful lithotomy. In India the native operators employ it, and, were we to credit the stories they tell us, with very great success. Our experience, however, is sufficient to prevent our being deluded by such narrations. Mr. King, of Patna, gives an interesting account of a native operator and his operation.

"At Poonerai, a village 3 coss from Patna, resides an Hujam, of the name of Chukkun; who says that he has performed the operation of lithotomy, on 35 persons, one only of whom died: in that case the stone was of a very large size, and broke into several pieces; the patient died on the 3d day after the operation. He shews 20 calculi, some of which are of considerable bulk. The instrument he uses, is something like a clumsy-made penknife, and he describes his mode of operating, as follows.

The patient being put in a convenient posture, and held firmly by several persons; an assistant presses the lower part of the abdomen, in the direction of the pelvis. The operator introduces his fore and middle fingers into the rectum, and crooking them so as to obtain a hold of the stone, he brings it towards the perinæum, till it becomes prominent there. He then makes an incision over the stone, (on one side of the raphé, and about an inch from the anus,) and extracts it. The urine passes through the wound for some days; and the cure is generally completed in from twelve to twenty days. Chukkun acquired his art from his father, and has now taught his son to perform the operation. As this man keeps no register of the cases, his statement may be liable to errors, respecting the numbers of persons on whom he has operated; and probably a liberal deduction should be made from his account of success, which it is of course his interest to magnify. In fact, it is almost an invariable custom with native operators, to assert that their operations are attended with certain success; and that cures in their hands are infallible. At the same time we must acknowledge, that they evince much cunning and dexterity in assigning reasons for not operating on unfavourable cases. They operate with a view to *cure*, and would not hazard their reputation for the prospect of alleviating continued suffering, when they did not expect ultimate recovery."

XLIII.

ST. GEORGE'S HOSPITAL.

We purpose in each succeeding number of this Journal to give a lengthened, and, we trust an interesting report of surgical and medical cases treated in this institution. On the utility of Hospital Reports we need say nothing, as the general demand for them proves that the profession attach to their acquisition some value, real or imaginary. It is true that there are inconveniences attendant on the practice of relating cases from public hospitals, and it is also true that, with all the publicity which those cases possess, there is yet much room for unintentional error, and intentional misrepresentation. Yet still the advantages predominate, and more especially this one, that the profession becomes acquainted with the results of treatment on a large scale, where accidental circumstances are less likely than in insulated and single experiments to interfere with the results. When particular remedies are in vogue it is scarcely possible to ascertain their actual merits in private practice, at least it requires the experience of a certain length of time to do so. But in hospitals diseases are usually presented in the mass, and accordingly we frequently find that true notions of the value of particular plans of treatment, and even an acquaintance with the phenomena of particular diseases, are entertained in hospitals long before they become generally diffused among medical men. The object of the hospital reporter should be to facilitate and expedite this diffusion of information.

We fear that clinical instruction will never be carried to the same perfection in this country, which it has attained upon the Continent. For this there are reasons on which we need not touch. But the records of our public institutions might, with little difficulty, be made more extensively and permanently useful than they are. In few hospitals, are there any lasting and easily available histories of the many valuable facts which are witnessed within their walls. Some may pass to the note book of the surgeon and physician, but they then are private property, and their utility is narrowed, perhaps destroyed. A more public, more systematic, more comprehensive, and more durable record should be established.

But we must take things as they are, and under existing circumstances we know of no better means of conveying abroad the knowledge which circulates, and is apt to be confined in a hospital, than by publishing a fair and, as far as possible, an accurate account of the most important cases which occur in it. Such cases may be reported in two ways, in groups, or as individuals. Both methods are serviceable and we shall adopt which appears most convenient at the time. In the present instance, we shall give the details of some cases which appear to deserve commemoration, without reference to any particuler subject.

1. Operation of Lithotomy for the Extraction of a Portion of Catheter from the Bladder.

A stout athletic looking man who had lost one leg at Waterloo was brought into the operating theatre, in order to have a portion of gum catheter extracted from his bladder, by the ordinary lateral operation of lithotomy.

It appeared from the man's statement, that many years ago he had been in the Hospital under Sir Everard Home, with stricture of the urethra. For eight years after leaving the hospital he had continued tolerably well, but subsequently to that period he had been subject to occasional attacks of retention of urine, for which he was in the habit of introducing for himself a gum catheter of moderate dimensions. The catheter last in use was so antique that he had been obliged to cut off the rounded extremity, in consequence of flaws and cracks at the eye. On the 1st of the present month he had the misfortune to let the instrument slip entirely into the urethra. After some ineffectual attempts to remove it by his own efforts, he went to a medical gentleman in the Vauxhall-road, who seized the catheter with a pair of forceps but could not withdraw it; it broke in the urethra, a large portion remaining in the bladder and vesical end of the canal. The patient describes the piece of catheter as forming a sort of projection in the perineum, and no doubt it might have been cut down on in that situation and extracted, if it could not have been removed by other means. The patient went his way and sought no further advice till the 3rd inst., when he repaired to another surgeon at Camberwell, who seems to have handled him rather roughly. This gentleman, whose incredulity appears to have been fully equal to that of the Lazarites, told the man he was a "bloody rogue," and summoned the new police. This sort of gend'armerie surgery did not satisfy the patient, who went to another doctor, and another, and ended at last by coming to the hospital where he had formerly received benefit. This was on the 4th inst., but the operation was not performed until the 8th. In the interim he suffered much. He had constant desire to make water; passed little at a time and that with pain; had violent pain in the right lumbar region, but not in the glans penis; had alkaline urine with deposition of mucus, and as we believe, the phosphates; and although some narcotics were administered he spent but a miserable time of it.

On the 8th, as we have stated, the operation was performed by Mr. Brodie. It was the usual lateral operation, but the incisions were rather smaller than are made for the extraction of a calculus. Mr. Brodie employed his beaked knife, and the prostate was divided, the forceps introduced, and the gum-catheter extracted with Mr. Brodie's general precision, facility, and dispatch. The catheter was moderately curved, five or six inches in length, cracked in several places, and incrusted with a deposition of the phosphate of lime. The patient bore the operation without a murmur, and on the 15th, when we saw him, the wound was nearly healed, and the urine almost natural.

Mr. Brodie made some valuable remarks upon the case to the gentlemen assembled to witness the operation. He said that he had never known a similar accident occur before,[*] although he had seen several instances of other foreign bodies slipping into the bladder and forming the nucleus of stone. One of these cases was rather curious. A gardener labouring under stricture conceived the ingenious but unsafe idea, of employing the bougies which Nature placed in his way. When labouring under more than ordinary difficulty in making water, he introduced a flower-stalk into the urethra and dilated the passage. But flower-stalks are brittle, and unfortunately one broke at last in the urethra, and a portion slipping into the bladder formed the nucleus of a stone which was afterwards removed by operation. Mr. Brodie pointed out the mortar-like incrustation on the catheter which he had just extracted. Now I know, said he, without resorting to any chemical analysis that this incrustation is the phosphate of lime, because in such cases it always is so. The foreign body in the bladder becomes a source of irritation and inflammation—the inflamed mucous membrane of the bladder secretes mucus—and from that mucus is deposited the phosphate of lime. It is true that if the case went on other depositions would occur. The irritation, which had its primary seat in the bladder, would be propagated to the kidney, to the system. The *secretion of urine* would then become depraved, the triple phosphate would be formed in the kidney, and this, mingling with the phosphate of lime in the bladder, would form the fusible calculus.

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[*] Much such a case occurred in Paris two or three years ago. The patient applied at La Charité, and M. Roux performed the lateral operation with the bistoire caché, for the extraction of the catheter. The patient died. The case was related in this Journal.

Mr. Brodie explained why he had not attempted to remove the catheter by Sir Astley Cooper's urethra forceps, or by a pair of his own, which he shewed, and which exhibits several improvements on the former. He considered that the foreign body had been in the bladder for some time, that it was described as being of considerable size, that he might have failed in its extraction and would have irritated further a part much irritated already. These and other considerations determined Mr. Brodie to cut into the bladder without any previous attempts with forceps, and the event has confirmed his judgment.

II. DIFFUSED HYDROCELE OF THE CORD.

We have lately seen two specimens of hydrocele of the cord, which can hardly be considered examples of that which is usually called encysted. The instances of encysted hydrocele of the cord, which we have seen, have been small, more or less globular in form, and circumscribed. But the swelling in the cases we are about to describe had not these characters.

We were struck with the appearance of the scrotum of a physician's patient in the dead-house of the hospital. There was a swelling, which, at first sight, looked like that of common hydrocele. It was large, and extended from near the ring to near the bottom of the scrotum—pyriform with the fundus below—immoveable, fluctuating, and *very* transparent. The testis was at its bottom, and rather to one side, but was firmly attached to the swelling. On dissecting the tumor, the cord was found spread out, its veins, in particular, being scattered irregularly over the sides of the swelling. The cyst was very thin, and occupied the cord from just below the ring to the testis; it appeared to be rather formed from the interstitial cellular tissue of the cord, than from that general cellular envelope or fascia which surrounds it. It was firmly attached below to the epidydimis, the direction of which was nearly horizontal, instead of obliquely from above downwards. The testis was below instead of in front, and its malposition gave it a dislocated appearance; it was healthy, and the cavity of the tunica vaginalis, though large, was free from fluid. The fluid of the cyst was very pellucid.

This may be considered as merely a large encysted hydrocele of the cord. However that may be, it is well for practitioners to know that the ordinary descriptions of encysted hydrocele will not apply to it, and that its characters so nearly resemble those of common hydrocele, as to make it likely to be mistaken for it. The points in which it differs from common hydrocele are, the position of the testis below rather than behind, and its very pellucid appearance between the eye and the light. Such a cyst, it must be recollected, is not strictly a serous membrane, nor so prone to inflammation and obliteration of its cavity by adhesions. It is well known that injections will not cure encysted hydrocele of the cord as they will hydrocele of the vaginal tunic, and it is probably from the operation of this law, that they will not do so. On looking at one of these cysts, we usually observe that it is extremely thin, and possesses but little vascularity; its growth is slow, its inflammation weak. In the encysted hydrocele of the cord, a seton will sometimes effect a cure—incision, and the introduction of lint into the cyst, is more certain. The treatment, which, when applied to the fibro-serous tunica vaginalis, excites very violent inflammation, causes barely sufficient in the pellucid cysts of the cord. It is on this account that we have drawn attention to this form of hydrocele, that practitioners may not deceive themselves and disappoint their patients, from imagining that they have a common hydrocele to deal with, when one of the kind we have been describing presents itself. Surgeons in large practice are probably well acquainted with the subject; but all surgeons are not in large practice, and things familiar to a Cooper or a Brodie are far from familiar to them.

III. Fatal Case of Constipation.

John Clements, æt. 35, admitted Nov. 23, 1831, under the care of Dr. Seymour.

Ten days previously he had been attacked with severe colicky pain in the right colic region, for which he was leeched, and we believe, bled. A day or two after that he had a motion, since which he had had none. He stated that previously to the attack of pain he had passed motions of the natural calibre, and that his bowels had not been unusually constipated.

On admission, the belly was enormously distended, hard, tympanitic, tender to the touch, particularly in the umbilical and cæcal regions. He felt great inconvenience and uneasiness—passed no flatus per anum—had stercoraceous vomiting. Features pinched—tongue thickly coated—pulse 110, rather feeble. The treatment adopted may be set down in the following series: bleeding, calomel and warm water injections—croton oil and enemata of castor oil—one oz. of quicksilver, afterwards repeated with enemata—assafœtida with turpentine enemata, wine, arrow-root, and beef tea—injections and a blister to the belly. All this was accomplished by dint of indefatigable exertions on the parts of physician, apothecary, and house-surgeon, in the short space of time that intervened between the 23d, when the patient entered the hospital, and the 27th when he died. At one time, under the assafœtida and turpentine administration, the halo of nasty effluvia round the bed, from the combined effects of these not inodorous substances and the stercoraceous vomit, was such as can be more easily imagined than described.

On examining the body the convolutions of the small intestines were found almost inextricably intertwined and bound together by coagulable lymph. The stomach was contracted, the small intestines distended with air, the cæcum of great size, the transverse and descending arches of the colon contracted and empty.

The cæcum, we have said, was of great size, dark coloured, thin, bursting under the slight touches of the house-surgeon who examined it, generally adherent to the abdominal parietes. Its mucous membrane was in part destroyed, and there was much extravasation of blood between its coats. The ileo-cæcal valve was large and tumid. The cæcum was filled with apparently a mixture of fluid fæces and the injections which had been thrown up. In the small intestines were some solid fæces. The peritoneal inflammation seemed to be chiefly of some days' standing. If a stricture existed in the twisted small intestines it was not made out. It was reported that the patient had previously had an attack of peritoneal inflammation.

Sundry conjectures were hazarded on the actual cause of the constipation. The facts are more valuable than were the theories.

IV. Fatal Results from Amputation of Fingers.

Case 1. A man aged 44, got the ring

finger of his left hand entangled in an iron chain employed in raising a very heavy weight; it was torn off at its second phalanx near its joint with the third. He applied at the hospital, and the house-surgeon found it necessary to amputate the ragged end of finger, which was done about the centre of the second phalanx. Nothing particular occurred until the sixth day after the accident, when he was attacked with rigors and pain in the hand. On the next day he was admitted into the hospital under Mr. Brodie.

The hand, especially its dorsum, was a good deal swollen, with diffuse redness and pain—some redness extending in streaks up the fore-arm, with enlarged glands in the axilla. There was pyrexia and rather an anxious countenance.

Numerous leeches were applied to the fore-arm, and calomel purgatives with fomentations, and antiphlogistic measures resorted to. On the next day the swelling was greater, and the pyrexia continued. On the 8th day, more pain—much swelling of the palm and dorsum of the hand—diffuse redness, tension, and tenderness of the latter. Leeches were again applied, and repeated on the following day. On the 10th day the hand was much the same, saving that the redness had in some degree subsided—pyrexia, with irritability, and some depression. This night he had a rigor followed by a slight hot stage, but much sweating. He looked anxious, low, and ill. He complained now of stiffness in the *right* arm, on the outside of which was tenderness, fulness, and a slight circumscribed erythematous blush; in short, a purulent depôt was here forming in the cellular membrane. There was a similar appearance commencing on the outside of the right fore-arm. Mr. Brodie determined to try the effects of the oxymuriate of mercury, which he ordered in doses of one-eighth of a grain three times daily.

On the 11th day he said he was much better, which patients labouring under the depôts most commonly do; his pinched and anxious countenance gave his tongue the lie. The belly was now tympanitic, the symptoms merging into symptomatic typhus; there was also slight oppression at the chest.

After this rigors took place at intervals—there was generally a disposition to perspiration—he had rambling delirium, yet if asked how he felt himself would say he was well—he passed his stools under him. On the 12th day a depôt was observed in the right thigh. On the 13th, diarrhœa having set in the oxymuriate was discontinued; it had obviously been productive of no benefit. A puncture was made in the hand first affected, and a good deal of pus let out. A puncture was also made in the depôt in the thigh, and pus discharged. On the 16th day, the diarrhœa being checked, the oxymuriate was resumed. He now became rapidly lower, the breathing grew frequent and oppressed, and he sank early in the following morning. For the last two or three days there had been no rigors.

There was no affection of the thoracic or abdominal viscera. The cranium was not examined, neither were the limbs, in consequence of the great repugnance of the friends.

CASE 2.—*Amputation of Finger—Erysipelas—Death.*

William Green, æt. 19, applied at the hospital as an out-patient, at the latter end of December, 1830, with disease in the joint between the 2d and 3d phalanges of the right fore-finger. The cartilages were ulcerated, there was great thickening of the soft parts, and several sinuses led down to the diseased joint. The disease had been the result of a slight accident. He went in the first instance to the Middlesex Hospital, but left it to apply to this.

Splints, &c. were employed, but the finger not becoming much better, and the lad being extremely desirous of its removal, it was amputated on January 15th, nearly midway between the metacarpo-phalangal and first phalangal joint. On the following morning the lad complained of feeling ill, and was rather feverish; he was therefore admitted into the house.

In the afternoon he had a rigor, and in the evening pyrexia; there was some fulness about the stump. *Ordered some calomel and James's powder, house physic, and salines.* On the 17th the pulse was more frequent, with headache; there were pain and starting in the stump, and a little diffuse redness about the dorsum and palm of the hand. On the 19th he was extremely irritable, and vomited several times. Some diffuse inflammation of the skin and cellular membrane, and also of the absorbents, appeared on the back of the hand. On the 20th the absorbents were inflamed as high as the axilla, where an enlarged and painful gland could be felt. The nitrate of silver was applied round the arm, above the inflamed absorbents and gland; the salines were continued. On the 21st there was little alteration. The nitrate of silver was applied over the inflamed surfaces on the hand and outside of the elbow. In the night he became quite delirious and unmanageable. On the 22nd, the face had a dull flush on it—skin dry—pulse 130, feeble—tongue red at the tip, white on the dorsum—bowels not open. He was extremely irritable and rather incoherent. Erysipelas of dull colour and without much vesication had appeared round the parts to which the nitrate of silver had been applied, this having produced vesication. The streaks produced by inflamed absorbents of the arm had nearly disappeared, but the axillary gland was still painful. The inflammation had never passed beyond the upper boundary of nitrate of silver. In the evening he had a furious paroxysm of maniacal delirium—the erysipelatous redness of the hand and elbow had spread, with deep dull colour and indistinct margin. He obtained no sleep till 5 A. M. of the 23d. On that day he was very low, with pulse 140, dry tongue, sordes about the teeth. The urine was drawn off; there was scarcely any in the bladder. He lay in a stupid state, scarcely answering any question. He was ordered some bark and ammonia, and a saline injection was administered.

24th. Passed a pretty quiet night. The stupor has now all the characters of that produced by effusion on the brain. He takes little notice of what is going on around him, but every now and then he suddenly utters some unconnected and irrelevant cries. Pupils dilated and sluggish—pulse 130, feeble—teeth incrusted with sordes—tongue dry, reddish brown—skin cool. The erysipelas has, for the last two days, been spreading on the fore-arm and hand, but little so upon the arm; it is of the same characters as before.

Emp. canth. nuchæ. Radatur caput et infr. capito raso ung. hyd. necnon etiam cruribus. P. c. h. cinchonæ.

On the 25th he was a shade better, calling on the house-surgeon by name, and appearing in all respects more sensible. Erysipelas had left the hand, and was spreading up the arm. Next day the gums appeared somewhat mercurialized. He continued a little better—pulse 110—no heat of skin. Camphor liniment was applied to the head instead of the mercurial ointment. On the 27th there was little alteration. The erysipelas had left the fore-arm and was creeping up over the shoulder, with little tumefaction, a tolerably good tint, and pretty distinct margin. The gums were decidedly affected—small pustules had appeared about the head. He was ordered a little porter. On the 28th there was little alteration. The blister on the neck, which had previously been dressed with mercurial, was now treated with savin ointment. *Ordered some infusion of cinchona and cusparia.*

On the 30th, the erysipelas had left the arm, but was spreading a little on the back—he would not take his food or medicine so well as before.

Emp. canth. capiti raso. Hyd. sub. gr. ij. *Ext. Lactucæ*, gr. v. 8vis. *horis. Adde haustui Amm. carb*. gr. v.

Feb. 2. There has been little alteration in the symptoms since the last report, save that the patient has been gradually sinking. There has been no further return of intelligence, and he has scarcely spoken for the last two or three days; now and then, when disturbed, he will mutter a few unintelligible exclamations. The erysipelas has extended a little on the back, but it is trifling both in character and in extent. Emaciation has taken place to a remarkable degree. On the following morning he died.

Sectio Cadaveris. *Cranium.*—No traces of inflammation of the membranes or substance of the brain. No serous effusion between the membranes. Ventricles large, filled with clear watery fluid; there was about half an ounce in each.

Thorax. Old adhesions on both sides of the chest. In the upper lobe of the left lung some common tubercles, in stages of maturation and softening. Some had formed small vomicæ about the size of nuts. The other lobe of the left lung, and the whole of the right were free from tuberculous formations.

Abdomen. Partial congestions and vascular injection of the mucous membrane of the lower part of the ileum. Here and there, small ulcerations in the mucous membrane, apparently not follicular, as in fever; there was no attempt at reparation.

We should mention that the stump had healed early, and without trouble.

Another instance of death from amputation of a finger, occurred in the practice of Mr. Babington. We have not preserved any notes of the case, but the following is an abstract of the particulars.

The patient, an old woman, was admitted with much disease of the thumb of the left hand. It was considerably enlarged, the integuments discoloured, and several sinuses led down to denuded bone in the phalangal articulation. Mr Babington removed the thumb below this joint. In a day or two inflammation attacked the cellular membrane and skin of the hand, and spread in an erysipelatous form up the fore-arm and arm. The swelling was not very considerable, the tint of the skin was a dull red, the margin tolerably distinct. Vesications occurred, but the cutis rapidly became mottled from extravasation into its texture, and then gradually died, exposing lymph and serum in the subcutaneous cellular tissue. The affection was by no means of that rapidly destructive character which traumatic gangrene assumes; it was in fact a mixture of erysipelas and diffuse cellular inflammation, occurring in a very debilitated and aged person. At the end of seven or eight days she died, her constitutional powers being evidently incapable of sustaining, or even originating the reparative process.

A case of a similar kind, though the patient ultimately recovered, occurred to Mr. Brodie. A finger was removed for disease of the first phalangal articulation. Erysipelas succeeded and passed up the fore-arm to the arm, where it stopped. Some incisions were necessary in the hand, and convalescence was slowly established.

V. Cases of Laceration of the Urethra.

Case 1. *Fractured Pelvis—lacerated Urethra.*

George Plummer, a carter, æt. 49, admitted June 18, 1830, under the care of Mr. Keate.

Whilst conducting his horses and cart at 9 a. m. this morning, he had occasion to jump off the shaft, and was severely crushed between the wheel and a post. He sank down and has since been incapable of using his lower extremities. The accident happened at no great distance from the hospital, and at 11 a. m. he was admitted.

There was evidently fracture of the pelvis in more than one place. A projecting edge of bone could be felt on the left ilium, about three inches behind its anterior superior spinous process. There was little ecchymosis about the pelvis, a good deal on the outside of the left thigh. Some blood had issued from the orifice of the urethra; he had made water about two or three hours previous to the accident.

Laid on back with pillows under knees.

At half-past one p. m. the catheter was introduced—an obstruction occurred about the membranous part, but was surmounted. The urine was bloody, but the greater quantity of blood issued at first.

Patient laid on Earle's bedstead, with a broad belt round the hips.

Vesp. Troublesome cough—some heat of skin. Urine drawn off, dark and bloody, without coagula.

H. salin. c. Tinct. hyos. ♏xx. *Sp. æth. nit,* ʒss. *Oxymel. scillæ,* ʒj. *Vin. ipec.* ♏xx. *6tis hor.*

19th. Urine thick and muddy-looking—pain in the pelvis on coughing. Pulse frequent, rather wiry—aspect anxious—no motion from the bowels.

Next day there was more pyrexia, and he complained of feeling "pain all over him"—the cough was troublesome, and expectoration difficult—the bowels open. The urine was now pretty clear. Gum catheter had been retained in bladder.

Linctus in tussim. H. sal. c. Vin. ant. t. ♏xx. *Tr. camph. c.* ʒss. *6tis hor. Omr. alia.*

On the 21st he was better, and on the 22d the catheter was removed. The urine continued clear, but was high-coloured. At 1, a.m. of the 23d he had a rigor, succeeded by heat, which soon passed away. Was this rigor occasioned by his making water without the catheter? He had passed urine at 9, p.m. the preceding evening. At 11, p.m. he had another rigor, without apparent cause. There were neither local nor general symptoms of any consequence.

No further report is necessary. Finding some little difficulty in making water, he introduced the gum catheter for himself occasionally. On the 20th July he was removed from Earle's bedstead, and, on the 10th August, began to walk about with crutches. At the end of the month he was discharged cured, and said that his bones felt stronger than before. We saw the man lately, and he continued well; he had very slight lameness.

CASE 2.—*Injury of the Pelvis—Lacerated Urethra.*

George Frost, æt. 11, admitted, Oct. 11th, 1830, under the care of Mr. Hawkins. At 8 o'clock this morning the lad was run over, at Putney, by a horse and cart heavily laden. The wheels appeared to pass over the pelvis, and there is reason to think that he was lying on his side or belly. Soon afterwards some blood issued from the orifice of the urethra.

He was admitted at 5, p.m. and, in the interval, he had either made no water at all, or very little. No fracture of the pelvis could be distinguished—there were contusions and effusion of blood, chiefly above and about the right natis, with some over the left hip. He complained of pain on moving the pelvis, and said he could not make water.

The catheter could not be introduced, the instrument appearing to hitch in some laceration on the left side of the urethra, whence bleeding readily occurred.

Tinct opii, ♏xx. *Fotus abdomini. Knees and feet bound together—double-inclined plane.*

On the following morning the house-surgeon passed the catheter, and drew off some bloody urine. At 1, p.m. it was again found impossible to introduce it. On the 27th, the catheter was re-introduced, with less difficulty. The urine was less bloody, but porter-coloured, and apparently mixed with much lithate of ammonia. The constitutional symptoms were those of febrile excitement, and a good deal of irritability. It has been mentioned that the boy was unable to make water by his own efforts. The treatment consisted in perfect repose, starvation, and occasional purgatives.

30th. Has continued much in the same state. Can rarely make water without the assistance of the catheter, and then it issues but sparingly, and on pressure above the pubes; it is mixed with the lithate of ammonia and some blood. No fever. *Ordered beef-tea.*

Next day he was placed on ordinary diet. On Nov. 2d, we find that he had made water without the assistance of the instrument for the preceding 24 hours. He was allowed to get up. On Nov. 6th there were no unpleasant symptoms, and he could make water well enough, without any appearance of blood in it. Dismissed.

In the two preceding cases, the exact amount and situation of the injury are, of course, problematical. It is not unlikely, from the nature of the injury, the bloody urine, and the difficulty experienced in both cases in the introduction of the catheter, that there was same laceration of the urethra. At the same time, it is reasonable to imagine that the laceration was not very extensive, because the urine soon ceased to be bloody, and no symptoms of its effusion into the cellular membrane ensued. Perhaps, in such cases, the mucous membrane, or even the spongy part of the urethra, may be lacerated, without any injury of the external fibrous tunic. This is conjectural; the facts themselves are practically interesting.

CASE 3.—*Ruptured Urethra—Purulent Depôts.*

We made the following memoranda of this case. It was treated last year in the hospital.

A middle-aged, healthy, labouring man fell astride a chair, and struck his perinæum. He was admitted into the hospital soon afterwards. He had made water with great pain, and there was much ecchymosis about the perinæum and scrotum. An attempt was made, without success, to pass a large silver catheter; it seemed to pass between the bladder and the rectum, and blood only flowed. A smaller gum catheter was introduced on the first trial; it was left in the bladder. The catheter slipped out now and then, and some difficulties occurred.

In a few days the man had a rigor, then another, and another. An incision was made in the perinæum, and a large opening into the urethra was found, with a sloughy state of the cellular membrane. He seemed to be relieved, but soon became very low; he was ordered a little support. Rigors again came on; abscesses formed about the right groin and upper part of the thigh—then swelling and acute pain in the calf of the left leg. He died with the usual symptoms of the purulent depôts. He had complained, before these symptoms commenced, of pain in the side of the chest and in the epigastrium; it seemed to be sympathetic.

On dissection, a large sloughy depôt was found between the deep and superficial layer of muscles in the calf of the left leg; some smaller deposites were also found in the cellular membrane elsewhere. There was much destruction of the lower wall of the urethra, opposite the incision in the perinæum, and also in another part, about an inch nearer to the bladder. The cellular membrane in the neighbourhood was dark and sloughy.

Several years ago, Mr. Brodie had a patient in the hospital with ruptured urethra. The accident occurred in a manner not very dissimilar to that in the last case. This patient died with the purulent depôts, but we do not exactly remember the particulars, and we do not possess any notes of the case. If our memory does not deceive us, there was a deposite of pus in the corpus spongiosum urethræ.

An instance of ruptured urethra, in a boy, occurred lately under Mr. Babington. It was necessary to make an incision in the perinæum, and the urine subsequently passed through the opening. When we saw the lad last, the perinæal wound was closing, and the discharge of urine by the natural channel was becoming daily more established.

VI. FRACTURED PELVIS.

In a former number of this Journal we reported two interesting cases of fractured pelvis, in one of which the bladder was ruptured, in the other the superior wall of the membranous part of the urethra, internal to the ligament of Camper. Both patients died with the symptoms and consequences of effusion of urine into the pelvic cellular membrane. The following case shews that fracture of the pelvis, unaccompanied with lesion of important organs or parts, is not necessarily fatal, even under unfavourable circumstances as to age and constitution.

Case. Mary Wilson, æt. 61, admitted Nov. 19th, 1830, under Mr. Hawkins.

She was received late in the evening of the 19th, having fallen from a ladder 12 feet high, immediately prior to her admission.

She was in a state of insensibility—arterial blood escaped from the right ear and from the nose—much ecchymosis over the os innominatum—right lower-extremity nearly motionless, and toes everted—crepitus distinct in the right os innominatum on flexion or rotation of the limb—on applying the hand to the bone itself a sensation of the existence of several fragments communicated to the fingers.

In the night she was so low as to require stimulants, but next morning some reaction had occurred. She was partially insensible, and made irrelevant answers to questions. The pupils were contracted and sluggish—the urine was not bloody.

Feet and knees bound together, and feet secured to the bed—pillows under the knees and shoulders—stimulants omitted—beef-tea and arrow-root.

21st. Face slightly flushed—pulse fuller. Regained her sensibility last night, and answers questions rationally—tongue dry, rough, furred.

H. salin. ex. Ammon. carb. 6*tis hor.*

22d. Bowels confined—tongue not so dry—lies in a half-dozing state. *Ol. ric.*

On the 24th she was ordered some porter. On the 27th, the report states that there had been little alteration for the last few days. She was inclined to that low delirium which is frequently seen in old people after injuries. She was sick several times on that morning.

Mist. camph. ℥iss. *Ammon. carb.* gr. v. *Sp. æth. nit.* ʒj. 6*tis hor.*

28th. During the last day or two there has been some cutaneous and cellular inflammation near the right olecranon, apparently the consequence of injury received in her fall. An incision was made yesterday, and some sloughy cellular membrane exposed. To-day there is a good deal of induration of the cellular membrane about the upper part of the forearm and bend of the arm, with dull, diffused redness of the skin. Pulse rather lower.

Incision made—a poultice.

On the 29th there was rather an extension of the redness down the forearm. On the 30th it was diminished, and there was less feverishness. On the latter day she was placed on ordinary diet. On Dec. 3d the incisions were enlarged, and matter which did not escape with freedom previously was discharged; after this she was relieved. On the 9th, cellular inflammation having re-appeared, incisions were made over the back of the elbow. There was still much ecchymosis about the pelvis, but no crepitus could now be felt.

Vin. rub. Oss. quotid.

We need not pursue the details farther. Sufficient to say that, under proper dressings and bandaging, the arm gradually got well, and the health improved in the same gradual but steady manner. On the 11th Jan. she could sit up very well, and soon afterwards she was wheeled about the ward in a chair. She was discharged at the latter end of the month, being then able to assist herself a little with crutches. We heard many months afterwards that she had continued to gain strength, but was not able to walk unsupported by crutches.

We may make an observation, which is applicable not only to this case but to many others. Placing pillows under the hams, and gently binding the knees and feet together, insures a considerable degree of quiet on the part of the patient. But frequently this position becomes so irksome that patients, especially the old and the young, cannot be persuaded to maintain it. Under such circumstances the best plan is either to put them on Earle's bedstead, or allow them to lie in a common bed in what position is most easy for them. It was necessary to do this in the last case.

VII. FRACTURED STERNUM FROM FALLING ON THE HEAD.

In the following case the sternum was fractured in rather an extraordinary manner. The reader will believe, or not, the correctness of the patient's statement.

Case. A stout and healthy labourer from the country, æt. 22, applied at the hospital May 26th, 1831. He walked into the out-patient's room with his head bent forwards, and was incapable of either flexing, extending, or rotating it further. He had all the appearance of having partially dislocated one of the cervical vertebræ, but no displacement could be discovered. On further examination there was found about three inches from the top of the sternum anteriorly a transverse projection, but the swelling was too considerable to allow of an accurate knowledge of its nature. The man stated that he had just fallen from the top of a hay-cart, and that he had pitched upon his head. He denied having struck the breast in any manner.

He was sent to bed, and in the evening ten leeches were applied over the sternum. There was no cough, nor indeed any other symptom of visceral injury. Some pyrexia succeeded, and salines were requisite. On the 30th, medicine was discontinued, and he was placed on ordinary diet.

June 1. All swelling has disappeared. The case is clearly one of fractured sternum, the upper portion being depressed behind the lower, and the superior margin of the latter causes the transvere projection already mentioned. The fracture is situate about opposite the cartilage of the third rib. On the head being thrown far backwards, the bones slip into apposition with an audible snap, but when the unnatural position of the head is discontinued, the displacement recurs with a snap also. It is no doubt through the agency of the sterno-cleido mastoid muscles, that the upper portion is drawn up on throwing the head back.

The means adopted were these:—keeping the chin as high and the head as far backwards as possible—a figure of 8 bandage to brace back the shoulders—a pad over the projecting portion of bone, and a circular roller on the chest to make pressure upon it, and prevent motion.

These measures did not remove the displacement, but they certainly diminished it. On the 17th the bandages were removed. There was now little riding of the bone, and no inconvenience produced by it. A large abscess was discovered in the right axilla, unattended with any constitutional disturbance. It was opened, the cavity gradually filled up, and the patient was dismissed cured.

There can be little doubt that this abscess was owing to the pressure of the figure of 8 bandage. We have seen the same result on two other occasions, and, what is singular, in no instance was much pain complained of prior to the discovery of the collection of matter. Another cause of suppuration, especially in the neighbourhood of fractures, is much or coarse examination. We think we have seen some very bad consequences from over-manipulation, simple fractures converted into compound, and compound fractures extremely aggravated. It is a question also whether leeches applied to fractured limbs, in which there is much swelling, do not give a tendency to diffuse inflammation and suppuration in the subcutaneous cellular membrane. We have certainly seen this commence around the leech-bites, but whether the circumstance is a post hoc or a propter hoc we cannot pretend to affirm.

In some cases of fractured scapula it was found necessary to adopt very different plans. In one, for instance, the hand of the injured side was placed on and secured to the opposite shoulder, in another this position was reversed, and the elbow was carried backward. We should say that it is impossible to lay down any other rule than this, in the management of fractures of the scapula below its spine—to see what position of the arm brings the broken portions best into apposition, and, having found that position, to maintain it.

In our next report we hope to give a more complete collection of cases on particular subjects in surgery.

XLIV

NITRIC ACID FOR TOOTHACHE.

We have received the following note in answer to Dr. Ryan. Whilst we agree to its insertion we cannot but regret that a professional question should breed any acrimonious feeling between two honourable men. We trust that the discussion will not be resumed, and that each gentleman will be satisfied that his character, both medical and private, stands well in the estimation of his brethren. We thus act as peace-maker, because we are truly sorry to observe any bickering or recrimination between persons whom we respect.

To the Editor of the Medico-Chirurgical Review.

Sir—I cannot allow the forthcoming number of your journal to go to press without acknowledging the *condescension* of Dr. Ryan, in informing you, and through you the medical public at large, by whom your excellent periodical is so generally perused, that *he* places *credence* in *my* statement respecting the use of nitric acid in some species of tooth ache—"'Tis an honor I dream'd not of" and "I must be more or less than mortal," as the noviciate says when returning thanks in his maiden speech, for having been toasted at a vestry or election dinner, "if I did not feel as I ought to do on the *important* occasion."

However singular it may appear to the Doctor, that I did not earlier publish the benefits resulting from the use of the acid, yet it is no less true than strange that I did for a period of *twelve* years (viz. from 1820 till 1832) and not *eight* as he erroneously calculates, apply it, and that too with pretty general success. From my brother practitioners in the neighbourhood I did not withhold the information, and from publishing it in some of the periodicals, I again assert I was deterred only till the "test of experience" should bear me out in doing so. Perhaps the Doctor will *deign* to admit the veracity of *this* part of my statement also, and then my design will be accomplished, and my claim to the priority of discovery based upon firmer foundations than even that of Mr. Myers, with whom alone I have to combat—I say with whom alone I have to combat, as the Doctor in my opinion has no pretensions whatever to the discovery (although he says my claims are no better than his own), for in the first place, Mr. Myers informed him of the particulars, and he now again confesses "several of his friends assure him they have known the acid applied to carious teeth many years ago." It is not from him then I wish to wrest the claim, but from Mr. Myers; and whether he or I, or any other person was the first to hit upon the remedy, it is sufficient that it is now before the public.

Trusting you will find a spare corner for this *billet*, and that the Doctor will join me when I say palmam qui meruit ferat,

I remain Sir,
Your obedient Servant,
W. THOMAS, *Surgeon.*

Pembroke Dock.
15th August, 1832.

XLV.

SEVERE INJURY OF THE HEAD—DISCHARGE OF BRAIN, AND, SUBSEQUENTLY, PUS FROM THE EAR.

THE following case has been transmitted to us by Mr. Elliot, a very intelligent surgeon of Lancashire. It is so interesting in its details, and was treated so judiciously, and successfully, that we feel great pleasure in giving it publicity in our pages.

Case.—At half-past 2 o'clock, p.m. the 28th of June, 1831, Edward Broadbent, a stout labourer, fell from a scaffold 30 feet in height to the ground, and pitched upon his head; he was removed senseless to the next house. At 3, p.m. the symptoms were these, viz. cold extremities—face pale—pulse scarcely perceptible—pupils dilated, and insensible to the impression of light—breathing tranquil—scalp apparently uninjured—rolling about the bed groaning, and putting his hands to his head—the knees drawn up towards the breast—a total suspension of the intellectual and mental powers—a discharge of brain from the ear, an ounce of which escaped during the afternoon—no vomiting. Ordered, bottles filled with warm water to the extremities, and two table-spoonsful of wine immediately.

℞. *Hydrarg. submur. gr.* x. *Pulv. jalap.* ℈j. *M. statim sumend.*

8, p.m. Reaction has taken place: pulse 115 and strong—heat restored—

furious delirium, three men having to hold him in bed—bowels unmoved. Venæsectio ad ℥xxx. To have the whole head shaved, and cold evaporating lotions constantly applied; 20 leeches to the temples, and a purgative enema.

℞. *Infus. sennæ*, ℥vj. *Magnes. sulphat.* ℥j. *M. capt. cochl.* ij. *ampla tertiâ quaque horâ.*

June 29th, 8, a.m. Has been very noisy during the night—talks incoherently—bowels have not been moved, as the medicine could not be got into him: the delirium comes on by paroxysms, in the intervals he is comatose. Pulse 116 and full—great heat of the scalp—pupils still dilated—tongue furred, dry, and brown: the discharge of brain from the ear has ceased.

Habeat Ol. croton. tiglii, gtt. ij. *to be dropped into his mouth while sleeping, and repeated pro re nata. Venæsectio ad* ℥xvj. *Empl. canthar. magn. nuchæ. Enema aloeticum. P. c. lot.*

Half-past 7, p.m. The medicine operated upon the bowels briskly; only one dose of the croton oil was taken—pulse 110, rather softer—pupils dilated—face flushed: complains of great pain of the head—rolls about the bed, his knees almost at his chin—great thirst and dry tongue.

Hirudines, No. xviij. *temporibus admovend. Lotiones continuantur.*

℞. *Hydrarg. submur.* gr. x. *Pulv. antim.* gr. iij. *Pulv. opii*, gr. jss. *M. h. s. sumend.*

June 30th, 9, a.m. Has had a very restless night—talks very much and incoherently—passes his urine and fæces involuntarily—pulse 108, full and hard—thirst urgent—great heat of the scalp—pupils continue dilated.

Hirudines, No. xx. *ponè aures. Venæsectio ad syncopen. Emplast. cantharid. toti capiti applicand. Lotiones continuantur.*

6, p.m. Begins to be more sensible, and complains of great pain in the head—pupils rather less dilated—pulse 120, small and feeble—has slept three hours, and taken a pint of milk. The cold applications to the head to be continued.

July 1st, 9, a.m. There is little alteration to be observed in the condition of the patient—has had a very restless, sleepless night, tossing about the bed, swearing, singing, and whistling alternately. The head has been well blistered; pulse 106, and strong—passes the excretions involuntarily—a little less pain of the head—scalp continues very hot—the breathing is rather stertorous.

℞. *Hydrarg. submur.* gr. iv. *Pulv. opii*, gr. ijss. *M. h. s. sumend. Sectio arteriæ temporalis, et detrahantur sanguinis unciæ decem.*

July 2d. Has slept four hours—pupils less dilated—headache better—pulse 106, and softer—no evacuation from the bowels—tongue furred—complains of thirst—continues for the most part delirious. *Lotiones continuantur.*

℞. *Hydrarg. submur.* gr. v. *Antim. tart.* gr. 1-3d, *statim.*

July 3d, *mane*. The early part of the night he has been tranquil—slept three hours, but awoke very delirious—face flushed—pulse 120, and strong—skin and scalp hot and dry—tongue furred and brown—pupils dilated—bowels unmoved—falls into a comatose state if undisturbed.

Habeat Ol. croton. tiglii, gtt. ij. *statim. Rept. V. Sectio ad* ℥xvj.

℞. *Ant. tart.* gr. jss. *Tinct. digitalis* ʒjss. *Liq. ammon. acet.* ℥iv. *Aquæ, q. s. ft.* ʒvj. *M. ex quâ Cochl.* ij. *ampla tertiâ quaque hora capienda.*

Vespere. Continues very delirious. Pulse 125—bowels freely moved—skin moist—pupils still continue dilated: has taken a pint of milk. The remedies to be continued, and a blister applied behind each ear.

July 4th. Has passed a better night—bowels continue free—skin moist, and less hot—blisters operating well—pupils less dilated—gums tender—can answer questions when roused, but falls again into a comatose state.

Lotiones et mistura continuantur.

July 5th. No untoward symptoms have appeared since yesterday—bowels have been twice moved—pupils less dilated—has slept a few hours—continues rather delirious, and complains of pain in the head.

Lotiones et mistura continuantur.

℞. *Hydrarg. submur.* gr. x. *Pulv. jalap.* gr. xvj. *statim sumend.*

July 6th. Has slept little—bowels have been moved twice—skin moist—pulse 118—can give no distinct answer to questions—complains of pain in the head—tongue dry, and mouth parched—thirst urgent—gums tender—very restless.

Hirudines, No. xij. *capiti*. *Contin. mistura et lotiones.*

℞. *Hydr. submur.* gr. x. *Pulv. antimonialis*, gr. iij. *Opii*, gr. ij. *M. h. s. sumend.*

July 7th. Slept four hours—appears more sensible—pulse 98—pupils a little dilated—bowels moved once—has taken a little milk and porridge—answers questions more distinctly—less headache—the action of the voluntary and involuntary muscles more perfect.

Cont. mistura et lotiones. Rep. Calomel et Opium hora somni.

July 8th. Has slept five hours, and says he feels better—pulse 100, and soft—skin moist—can answer questions more distinctly when roused—is rather noisy at times—bowels have been moved twice during the night.

My patient being a pauper, belonging to the parish of Ashton-under-Lyne, was this afternoon removed to the parish hospital, a distance of six miles, and placed under the care of my friend, Dr. Campbell, of that town, by whom I am informed, that he found it necessary to continue the antiphlogistic treatment for three weeks before any very decided amendment was perceptible, and that a considerable discharge of pus took place from the ear. The man is now following his usual occupation, and enjoying good health, without any diminution of his mental faculties.

JAMES ELLIOTT, Surgeon.

Lees, near Oldham, Lancashire,
Nov. 24th, 1831.

XLVI.

EXTENSIVE FRACTURE OF THE PELVIS, AND RUPTURE OF THE BLADDER.

THE following case has also been transmitted to us, and is interesting as shewing the quantum of injury that may be borne. Rupture of the bladder is always a formidable, generally a fatal injury, and in the present case it was unusually severe.

Norfolk Island, 12*th Dec*. 1831.

Thomas Asmond, prisoner of the Crown, labourer, æt. 21, of robust make, and sanguine temperament, was brought to the hospital this afternoon, 5, p. m., in consequence of a bank of earth at which he was working having fallen upon him. He complained of extreme pain in the hypogastric and iliac regions. Said he felt "something give way at the time of the accident in his belly, and as if his guts had fallen down into his purse." He also complained of great pain in his right hip which he said "was out." Face pale and covered with a cold clammy perspiration—lips livid—pulse scarcely perceptible—a small quantity of blood issued from the penis—could pass no urine; the catheter was introduced, but only a little blood was passed. Thirty minims of tincture of opium were administered with a little wine. Fotus abdomini.

Half-past 9. Much the same—still low—wine and water from time to time. Inj. enema com.

13th. Passed a very uneasy and restless night; had only one motion during the night, and that, partly of the injection mixed with blood. Scrotum greatly distended with blood and serum, and half of the penis injected also. Two incisions were made in the scrotum, from which a quantity of bloody serum escaped. Cont. fomentatio. Pulv. purgant. ʒss.

Evening. No effect from the powder, and an enema was thrown up, which produced no effect, and two drops of croton oil were given, from which he had three thin watery stools. Penis completely injected; abdomen extremely painful, tense, and tender to the touch. Pulse 124, small, but rather hard. V.S. ad levamen symptomatum—semicupium.

14th. Eighteen ounces of blood were only abstracted, which exhibited a firm coagulum, without any other marks of inflammatory action. Had a most uncomfortable night—several thin stools from a purging draught taken early this morning. Abdomen tense, but not so tender. Pulse weak and intermittent. Distention of scrotum and penis much complained of. Several punctures made in both, and a quantity of thin fluid mixed with blood escaped. Cont. fotus et potus vegetabilis.

Evening. Has been very restless and uneasy—frequent thin stools—occasional delirium—pulse intermittent—mouth dry and parched—in short, he appears to be rapidly sinking.

15th. No sleep—very uneasy, but suffering less pain. Had an inclination to make water, but could not. Catheter introduced, and a small quantity of urine mixed with blood was drawn off, which he thought afforded him considerable relief. Copious discharge of bloody serum from the scrotum. Cont. fomentatio—nec non potus vegetabilis.

16th. Symptoms most unfavourable —gradually sinking, and died at one o'clock, p.m.

Sectio Cadaveris. All the soft parts in the hypogastric and lumbar regions seemed to suffer from contusion, and the scrotum and penis greatly distended with blood, as well as the muscular parts about the perinæum. On opening the abdomen, the intestines were much distended with flatus, and a slight blush of inflammation was on the small intestines. My attention was principally directed to the hypogastric region, which was the seat of his injury. I found the bladder nearly empty, and on passing my hand into the pelvis, a rupture was discovered at its fundus, which the symptoms on admission into hospital warranted my suspecting to be the nature of the injury. On further examination, a second rupture was discovered at its neck close to the prostate. From the extensive injury, the quantity of blood effused into the surrounding structures would prove the laceration of numerous blood-vessels. As the man complained of great pain in his right hip, my attention was next directed to that part, and I found that the injury to the bones, composing the pelvis, was most extensive. A fracture of the horizontal ramus of the pubes with the ileum, passing through the thyroid foramen, and extending through the ischium at its tuberosity. The attachment of the bladder to these bones was completely torn through, and it was at this place where the rupture of the fundus was observed—other fractures of this bone were found, one extending backwards and downwards from the middle of the crista of the ileum to its connexion with the sacrum, and another from the posterior part of the crista to the same connectedly, both fractures meeting at the upper part of the junction of the two bones. The opposite bones of the pelvis were fractured nearly in a similar manner. All the other viscera were healthy.

Remarks. On the receipt of the injury this man was in rude health, and from the detailed statement of the severe injury he sustained, no plan of treatment could save him. The shock which his system had sustained was so severe, that I thought, on his being brought to the hospital, that his dissolution must be immediate. The stimuli which were called for produced a sufficient reaction to keep up the circulation throughout the night. As soon as any tenderness on pressing the abdomen appeared, the lancet was employed with other suitable remedies to check inflammation; but such was the shock to the nervous system, that no reaction of any importance was produced, and therefore it is to be presumed that death was hastened by the depression of nervous energy.

ALEX. GAMACK,
Colonial Assist. Surg.

XLVII.

CASES OF PHLEBITIS—ADVANTAGES OF FREE OPENINGS.

WE have already noticed the Madras Reports published by the Medical Board in 1831, and kindly presented with the sanction of Government, to the Editor of this Journal. It unnecessary for us to say how much we approve of the practice, becoming daily more general, of publishing the Transactions of Societies, the interesting cases that occur in public institutions, and the documents in the possession of public boards. In such publications there are fewer inducements to distort facts, to magnify success, or conceal failures, and therefore we can place more reliance on what is offered us, than, unfortunately we can always venture to extend to more private statements. We therefore beg to offer our meed of approbation of the plan pursued in the present instance by the Madras Board.

We are tempted to notice some cases of phlebitis offered as illustrative of a mode of treatment by an operation, practised by the late surgeon Thomas Bond, of the Madras European Regiment.

CASE 1.—*Phlebitis—fatal.* J.R. private, æt. 39, 14 years resident in India, was admitted into hospital January 27, 1827, with symptoms of spasmodic asthma, &c., for which he was bled in the right cephalic vein, and took mercury to ptyalism. On Feb. 2, he complained of the arm being very painful—it was much inflamed round the joint, very tender to the touch, and a drop or two of matter exuded from the orifice on pressure. Thirty leeches and a poultice were applied, and next day it was still swelled, but without pain; he looked very anxious and sal-sallow. He was allowed some port wine. In the evening he had an opiate followed by some aperient medicine. He vomited after the medicine, and next morning the arm was much swelled and very painful, and his countenance was worse. He was ordered camphor, and the leeches were repeated. On the 5th the swelling was extending up the shoulder, the puncture closed. We may mention that the cellular membrane appeared more affected than the vein, and in the evening of the 6th the swelling and tension were greatest at the inner side of the arm and not in the course of the vein. The treatment consisted in mild aperients, opiates, and baths. On the 7th he was delirious, the pulse 86 and very weak, the countenance extremely anxious. In the evening he was more delirious, the pulse 130, the skin hot. On the 9th we find him with low muttering delirium, countenance deadly, pulse 100, tongue 'discoloured.' *Ordered quina and wine and water—a blister to the spine.* The arm was scarcely larger than the other. He sank and expired at 2 A. M. of the 11th.

Sectio Cadaveris. "Coagulable lymph was thrown out in the cellular membrane. The integuments around the wound adhering strongly together, and to the wound in the vein. The vein quite closed. The vein was laid open and found to be thickened, and full of pus, up to the insertion of the deltoid muscle, from which place it was empty and sound. The abdominal viscera, heart, and the lungs, were healthy; but the latter adhered to the pleura costalis, by old adhesion."

In perusing the foregoing case we cannot but be struck with the vacillating treatment pursued. The patient is leeched on the 2nd, ordered port wine on the 3d, camphor and leeches on the 4th, and so on. However, those who have seen many cases of phlebitis will probably be most charitable in judging of treatment.

CASE 2.—*Phlebitis after Venesection—Operation—recovery.*

Ensign H. æt. 19, resident in India one year, was bled to syncope (Bijur) in the night of Feb. 14, 1827, for dysenteric symptoms. He used the arm much in the night, and the bandage came off. The night of the 15th was very restless, he vomited frequently, and had much heat of skin and headache, with furred tongue, pulse 120. The arm was painful, but not swelled, there was a little redness round the puncture, and on pressing around it with a sponge a small quantity of pus and blood was discharged. He had taken since the 14th a scruple of calomel, and two of blue pill. *Wound closed with sticking plaister**—*cold lo-*

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* This we think decidedly bad practice. A light poultice should have been applied.—*Rev.*

tion—and purgative medicine. At 2 P. M. the arm was more painful—skin hot and dry—had vomited—more pus pressed from puncture. In the evening 18 leeches were applied and afterwards a compress was put on four inches above the puncture. *Calomel and opium—salines with laudanum and antimony—bath.* On the 17th the arm was more swollen below the compress. There was little alteration till noon of the 18th, when there was increased heat of skin, the arm was more painful and swollen towards the compress, and more matter was pressed from the wound by drawing the finger down the vein, from the compress to the puncture. At 3 P. M. the vein was swelled up to the shoulder, with great constitutional irritation. The following operation was performed.

"An incision was made with a scalpel through the integuments, and the median basilic vein exposed, a director was then introduced through the puncture, and, with a probe-pointed bistoury, the opening was extended above and below as far as there was any appearance of pus, which was carefully extracted by pressure, and the wound closed in the usual manner. The application of the compress was continued till the 22d in the morning."

About ʒij. or ʒiij. of pus were evacuated, and the wound was dressed with a resino-terebinthinate ointment. In the course of half an hour the constitutional irritation had remarkably subsided, and the countenance, previously extremely anxious, was more composed. The same plan of treatment was persevered in, the patient taking a calomel and opium pill at night, with a diaphoretic opiate, and aperients. On the 19th, he was ordered quina, arrow-root with wine, and camphor. On the 20th he was improving, the arm was dressed and better: it discharged freely. In the evening he was worse, the pulse being much quickened, with pain in the chest. *Calomel and opium and an anodyne.* After the increase of heat perspiration occurred, and in point of fact there was a paroxysm of fever, though without any perceptible rigor. Next day he was better, but had a slight cough. We need not pursue the details. On the 24th the arm was well, and some derangement of the hepatic function with a slight cough was his sole complaint. He soon perfectly recovered.

Case 3.—*Phlebitis after Venesection—Operation—Recovery.*

John Palmer, private, æt. 24, resident in India two months, was admitted, March 16th, 1827, with acute hepatitis, for which ℔ij. of blood were taken from the right cephalic vein. The treatment for inflammation of the liver was continued; but, on the evening of the 18th, he complained of pain in the arm, which was swollen, and the vein was found inflamed—pulse 100—headache. On the next morning he was free from fever, but the arm was as before. A compress and bandage placed on the vein, above the puncture, and the whole arm laid on a soft poultice. In the evening the arm was more painful and swollen, the inflammation reaching as high as the compress, though no pus appeared at the puncture—pulse 100—headache—fever—anxious countenance. *Calomel c. Pulv. antim. et Op—Baln.* He passed a feverish night, but next day he was cool, with furred tongue, and anxious countenance; a little pus could be pressed from the wound.

"An incision extending from one inch below, to one inch above, the puncture, was made into the vein; its coats were found to be much thickened, its cavity larger than natural (on account of the compress placed on it above), and containing from about two, to three, drachms of pus. The inflammation does not extend beyond the compress; but a little pus was pressed from the portion of vein next the hand. The wound was dressed with ungt. resin. flav. with a little oil of turpentine added to it. The arm again placed in a poultice."

He was ordered quinine, and under its exhibition, with occasional purgatives, no further unfavourable symptoms occurred. On the 23d, he is reported as getting rapidly well, and in a few days the arm healed.

CASE 4.—*Phlebitis after Venesection, fatal—Pus in the deeper Veins.*

T. H. private, æt. 22, in India five months, admitted June 27th, 1827, with feverishness and headache. The median basilic vein was opened, but, not bleeding freely, the cephalic in the same arm was cut, and ℔j. of blood extracted, with relief. He was leeched thrice, and appeared to be doing well, till the morning of the 30th, when the arm was painful; both punctures were inflamed, but the inflammation appeared to extend up the cephalic vein, and not up the basilic. A pad and bandage were applied about the centre of the arm, and cold lotion used. In the evening the arm was worse, with fever. The cephalic vein was laid open as in the former cases, and ʒij. of pus discharged from it, a little being pressed out of the median basilic, and a little from the puncture in the basilic. The arm was laid in a poultice; the treatment much as in the former cases. On July 1st, he seemed better, a little matter oozed out at the puncture in the median basilic, without apparent inflammation; the gums were tender. On the 3d, we find no pain or inflammation in the arm, the wound suppurating and looking well. Ordered quinine and wine in arrow-root. On the 5th he had pain across the pit of the stomach, and leeches were applied. In the evening, he had that all-but-fatal symptom in such cases, severe rigors and fever. Next day he looked ill, his appearance indicating mischief, though the arm shewed nothing amiss. The median basilic vein was laid open, and found to have a black appearance. In the evening of the 7th he had another attack of fever; and, on the 8th, he said he felt better, "though he did not look so," a very characteristic symptom. He gradually sank, and died at 7, p.m. of the 11th.

On dissection, the veins which had been operated on looked healthy, but the deep-seated veins, especially the brachial, were found full of pus. No mention is made of the state of the liver or lungs.

We have analysed these cases, because we think they inculcate an important point of practice, that of laying open freely an inflamed and suppurating vein. The secondary consequences of phlebitis, as of other injuries, are most frequently observed when matter is locked up or does not freely escape. It is on this account that diffuse inflammation of the cellular membrane, between muscles, is so much more frequently followed by visceral deposites, than diffuse inflammation of the subcutaneous cellular tissue. We do not place much confidence on the employment of pressure by a pad; on the contrary we are tempted to believe that it is injurious, by the mechanical obstruction offered to the circulation of the limb. Every surgeon is aware how much any ligature, or compression on an inflamed limb, interferes with the natural processes of reparation. We suspect, from the manner in which the foregoing cases are drawn up, that the reporters are not aware of all that has been done in the investigation of the secondary inflammations. Thus, in the last case, we are informed, after the occurrence of rigors, that "the arm does not seem to be at all connected with his ill-health, but the disease to be in the liver, in the bowels." No surgeon who had seen many cases of the purulent depôts would make such a remark. However, we again beg to draw particular attention to the practice employed in some of these cases, and to advocate most warmly the free opening of inflamed veins, when the surgeon has reason to believe that they contain pus, which does not escape with the utmost freedom and facility.

XLVIII.

CHOLERA.

WE have lately dedicated so much of our space to cholera, that both ourselves and our readers must be somewhat sick of it. If we say little at present, it is because there is really little to say—little, at least, that is new. It is true that every day brings a fresh specific; yet, strange to tell, the lying cholera-list shews no alteration in the relative proportion of recoveries and deaths. There must surely be something rotten in the state of Denmark, when, out of the multitude of certain, or nearly certain remedies, from the tincture of the Russian Merchant on Cornhill to the salts of Dr. Stevens, none have yet effected, what all pretend to effect, a diminution in the gross mortality. Amidst the variety of remedies presented to our notice, we feel like a hungry guest with a splendid bill of fare—each article tempts, but which shall he prefer? One gentleman cures cholera with cold water—another removes it with hot—a third puts it to flight with calomel and opium—a fourth exclaims that calomel and opium are poison, and drenches with salt water—a fifth declaims against the absurdity of salines by the mouth, and throws them into the veins—a sixth—but why should we go on? It is enough that all are sanguine, all successful, all full of cases confirmatory of their statements; yet, notwithstanding, the cholera kills as many as if all the projectors, and all the schemes, were still in the wombs of the journals.

With our boasted civilization and intellect, we walk the same mill-horse round we have walked before, and that others have walked before us. When cholera appeared in Hindostan, the papers so teemed with specifics and cures, that the Government put a stop to their further publication, on account of the mortality they caused. Our Government has not the power to do this; and we may thank our forefathers that, in this happy country, any one may cure himself to death as he pleases. Gentlemen are at liberty to publish their miracles, and the faithful are equally at liberty to believe them. For ourselves, what shall we say? Alas! we must own that we are gloomy, heartless sceptics, without so much as a grain of faith, or one single, saving particle of belief. Would that it were otherwise—would that we could only so much as imagine that cholera has been, is, or will be cured by the thousand and one plans, of happy memory, already published, publishing, or to be published. Carbonari that we are, we believe not a word of it.

In sober sadness, when we look at the official reports, and when we pay regard to our own experience, we cannot attach the slightest importance to the statements of cures in the weekly and other journals. In point of fact, we know no better mode of treating cholera now than when it first appeared in the island, and the really severe cases are just as fatal as they ever have been. The only solid benefit that has hitherto been derived from the investigation of the malady in this country, is the attention directed to the premonitory symptoms, especially the diarrhœa.

We have frequently been asked if our opinions on the question of contagion have been modified by longer experience. We say most unhesitatingly, no. We were contingent contagionists, and contingent contagionists we remain. Under favourable circumstances we have believed and do believe in the propagation of the disease by contagion, but under ordinary circumstances we deny it. Who sees it spread in a family where ventilation is procurable and cleanliness observed—how many have been attacked in the household of Mrs. Smith, of Lord Holland, of the Bishop of London, nay, even of Majesty? But we are not about to rip up this discussion, for we think it acknowledged on all hands, that few but the most bigotted and most blind imagine that cholera is the virulent contagion which many would have us believe it.

The Medical Gazette has lately related two circumstances not undeserving of attention. The first is the appearance of cholera in Canada. It is stated, (we cannot lay our hands on the number,) that the disease appeared soon after the arrival of an emigrant ship from an Irish port where the cholera prevailed, and that in the first instance it attacked the emigrants, and from them spread to the inhabitants of Quebec. Such statements should hardly be received on vague authority, not even on the word of that omnipresent personage, "a correspondent on whom we can rely." It will be time to pay attention to such facts when they come in a questionable shape. Our contemporary, indeed, appears to have a fancy for such props on which to lean his editorial elbows. A little while ago he assured us on the representation of "an estimable physician," or some such satisfactory testimony, that contagion was proved to demonstration in Edinburgh. Ah! Dr. Craigie what are you about? proved to be roaming aud snubbed in your own Athens!

We beg pardon for troubling the Gazette, but one word more and we have done. It cites with an air of something not very unlike triumph the recantation of M. Velpeau. This gentleman signed the famous anti-contagious *compte-rendu* of the Parisian faculty, on the outbreak of cholera in that metropolis. He has since found reason to change his opinion, and published the facts which have led him to do so. We find no fault with M. Velpeau for this, nor do we complain of the Gazette for noticing it. It slily chuckles at the Frenchman's reformation. We protest we quite envy it that saintly and celestial joy which it must feel over *one* repenting sinner. We almost wish we were contagionists ourselves, to feel the fragrance of a delicious sensation that can hardly be conceived on this side the grave.

The Board of Health has published a new circular, in some respects unlike the last. We have often thought that such instructions, issued by Boards of Health, not only in this Country but in others, are either useless or injurious. They can scarcely be fitted at once for the public and the profession, and yet, if they are separately addressed to one, they are apt to be neglected by the other. Regulations must necessarily be, in some degree, issued *ex cathedrâ*, yet it is not to be supposed that professional men will recognize, in Boards, the right divine of deciding on points which occupy their own attention, and are yet in abeyance. If a Board, for instance, meddles with the question of contagion, it must necessarily displease one party, and, differing from it in opinion, must be exposed to all the consequences of free party discussion. These are difficulties that must surround all Boards in the present day; and we cannot be surprised that the present should be sensibly affected by them.

To point them out more clearly, let us enter a little into detail.

In the paper before us, which is somewhat lengthy, and contains 41 paragraphs or sections, we find twelve prescriptions, two for pills, three for powders, three for draughts, one for mixture, and three for external applications. Now it is to be presumed, that each is adapted for some particular feature of the complaint, some situation in which the unhappy individual may find himself suddenly and inopportunely placed—it must be presumed, in short, that the prescriptions are neither too numerous nor too few. Then he is to get them all, but when got how is he to use them? We suppose that the code of instructions to which these prescriptions are appended, will instruct him. Let us look at these instructions—we will just take 39 and 40.

"39. It often happens, however, notwithstanding all our Care, that the Reestablishment of the Pulse and Heat are closely followed by Symptoms of Fever, by some Degree of Stupor, by great Oppression of breathing, by Distension and Tenderness of the Belly; all of which indicate Danger.

40. The moment such Symptoms appear, bleed from the Arm, or from the Part most affected, by Leeches or Capping, to 10, 12, or 16 Ounces, according to the Effect produced by the Bleeding. Reduce the Temperature of the Patient's Room, give cool Drinks, and apply cold wet Clothes or pounded Ice in Bladders to the head; and give the Powders, No. 5, as already ordered."

It is evident that this is not directed to the patient but to the medical attendant. So the directions become of little or no use to non-professional persons, and are intended for the guidance of the profession. But if promulgated with such a view, why enter into trifling details, why omit all mention of such agents as saline injections, &c. In fine, turn it over how we may, we see very many inconsistencies — the document is too particular for patients, too general for the profession. The former cannot comprehend it, the latter will not respect it. Besides it is ridiculous to observe the dogmatical tone which such directions breathe. Like the centurion, Boards are somewhat positive; they say to this prescription come, and it cometh; and to that symptom go, and it goeth. The whole affair is, as Nebuchednezzar's image, one foot iron and the other clay. The only chance which a circular has of being serviceable against cholera, is by being applied in removing an usual and disagreeable effect of the extreme alvine irritability attending it.

We had just penned these reflections when we received the Lancet for Sept. 8th. The leading article is devoted to the proposal of a travelling cholera commission of three, to be "placed under the orders of the Board of Health." The triumvirs are to be men of "indisputable integrity, acknowledged ability, and ample experience of disease in general, and this disease in particular." Where these black swans are to be found we are not told, but doubtless there is *somewhere* a stock, like the one pound notes that saved the Bank, from which the nation may be furnished in its need.

"An inquiry of this kind should be instituted at the expense of the *nation*, and conducted by medical men of indisputable integrity, acknowledged ability, and ample experience of disease in general, and this disease in particular. The *clinical investigations* should be pursued in the localities where the epidemic presents itself in its worst forms.

To meet these objects, a travelling commission, consisting *at least* of three medical gentlemen, should be formed, and placed under the orders of the Government Board of Health. Their business should be to repair to the worst scenes of the epidemic at a moment's notice, and there put in practice any method of treatment directed by the Board. To afford a fair field for their investigations, the expense of the temporary experimental hospital should be defrayed from the *national* treasury.

In giving directions to the moveable commission for the institution of these clinical trials, the Government Board should not be altogether invested with a discretionary power. We must explain.—No proposal of treatment, for example, should be carried into extensive trial at the public expense until some evidence of its probable value is previously obtained. Thus the Board should not be permitted to institute a method never before tried, and merely proposed on uncertain theoretical data. Sufficient evidence should be first laid before them of the promising nature of the proposal.

The moveable commission should be in every respect the agents of the Board, and be totally deprived of any discretionary power in the treatment of the cases, ample and minute directions being in every instance given by the Board. As the proposer of a practice would probably desire to see his intentions exactly carried into effect, he should be permitted, or rather invited, to inspect the treatment of the cases, and see that everything was accurately done. The expenses of the proposer should of course be defrayed from the public treasury, should a favorable report be made on his method by the moveable commission.

As the peculiar service of the commission would expose them to constant and intense danger, provision should be made for their families in the event of their falling victims to their public labours.

In the management of any system of treatment, the cases should be visited *at least every hour*, and minute reports forthwith entered in a book, and signed by the officer in attendance. Each method of treatment should be carried into trial on from ten to fifty patients. A report should be made on the termination of each general experiment, and such report published in the medical and other public journals."

When such propositions are seriously made, there is no use mincing the matter. The profession would place no confidence in any commission of the kind, for who would pretend to select three men, who could fairly be considered as fit for such an office, or really the delegates and representatives of the profession. So far from seeing any benefit in such commissions, we should apprehend nothing but an interminable system of jobs, without any advantage to the public equivalent to the expense, any satisfaction to the profession, or any benefit to science. The Lancet, indeed, is sanguine, nay it even imagines that a specific may already exist, locked up perhaps, like Solomon's seal, in a portmanteau. "It is *not impossible*," says he, "that a *specific* for cholera has already been discovered." Nay the idea has so laid hold of the imagination of our contemporary, that he even pictures to himself the discoverer of the secret, in the new commission, becoming the possessor of a title! Baron Cholera, of Cholera Hall, would certainly sound lordly and well.

"Even supposing the contingency of wealth and title to be the reward of the discovery of some proved specific, does there exist the wretch who would grudge the outlay for such deserts?"

We are sure we would not.

But we pass to another subject, having more of substantial and melancholy reality around it. We allude to the recent riot at Manchester, of which the particulars have been given in the newspapers. We cannot but agree with the editors of the Herald and Times, in lamenting that an excuse should have been presented to a misguided and ignorant mob, for allowing their passions to lead them to cruelty, outrage, and destruction. The folly of decapitating a boy dead in a cholera hospital, reckless or ignorant of what consequences might arise, deserves the most severe reprehension. But this was only the immediate cause of the tumult in question; the real and efficient one lies much more deeply. It is to be found in our police regulations, in our quarantine, in short in the contagious doctrines and regulations formerly promulgated by authority. Most medical men have remarked the strong sense in medical matters frequently displayed by the editor of the Times. On the present occasion he has shewn his usual sagacity and tact. The article is short and we insert it.

"It is distressing to witness among the sensible people of this country a scene like that which occurred at Manchester on Sunday last, (a description of which will be found in another column), and it is still more distressing to reflect that any cause should have been given for such a popular tumult by a previous outrage on popular feeling. The poor and uninstructed, though sensible to unequivocal kindness, are but too apt to be suspicious of ill-usage, where the dearest ties of life are concerned, and where, in their view, distinctions are made between their own relatives and those of their more powerful neighbours. Hence in epidemics, where police regulations are adopted to prevent alleged contagion, or particular modes of medical treatment are authoritatively enforced to dispel disease, they are prone to believe that they are hardly dealt with, merely because they are poor,—that the doctor is their enemy, if not their future assassin,—that the wealthy classes desire only to consult their own security at the expense of their indigent brethren,—that the hospital is intended as a preparatory depôt for the grave, and that the period of interment is hastened, or the mode of interment is altered, to conceal the violence perpetrated on the dead or to inflict insult on the best sympathies of the living. Hence the riots and the reports of poisoning which occurred when the cholera reached Paris; hence the rebellion against the magistrates and the faculty in Hungary; and hence the general aversion of the common people in all countries to those regulations which remove their relatives from their personal care, or order them to be buried at a shorter interval after the fatal termination of the malady.

In the recent case of Manchester there was, unhappily, a new circumstance of suspicion to warrant a more violent explosion of the common feeling. The child had most improperly been converted into a subject for dissection, and his corpse had been mutilated before interment, though nobody but the most ignorant and thoughtless participator in the tumult could have imagined that he was murdered in the hospital. We regret this circumstance the more, as, connected with the new anatomy bill, it will create alarm in the minds of those whose circumstances may require hospital relief, that if they die, like this poor child, under medical treatment, their bodies may be refused to their relatives, as his was to his grandfather, and reserved for anatomical dissection.

But this is not the purpose for which we have alluded to the Manchester tumult or its cause. Our object is to suggest the policy or necessity of *changing that system* with respect to this epidemic which has given so great, and in our opinion, such just cause of offence to the poorer classes who have lost their relatives, or are themselves threatened by its attacks. *Why is a particular spot selected for the interment of persons who die of the cholera?* Why are their relatives compelled to bury them when they have a suspicion in their minds that they may still be alive? No precaution has yet prevented the spread of the malady, and if it be contagious, it is the most capricious contagion which was ever known. Physicians who attend the hospitals are more likely to spread it than the undertaker, although he were allowed to execute his work in the regular way, and after the regular time. At any rate, it may be supposed to be buried in the grave which contains its victim, and is not likely to rise to attack the present generation. *We are convinced that more evil than good has been caused by these regulations to which the common people have shewn such aversion, and which have prevented them from deriving all the advantages which they might* from the means of relief or cure placed within their reach."

Every syllable of this is true. Why what a mummery it is to select particular spots for the burial of the dead; what a disgusting exhibition of humbug and of folly. Are the quiet tenants of the grave to be protected from the contact of the pestilential corpse? do their buried ancestors refuse commune with the cholera dead? or are the burials so numerous as to taint the air of the ordinary church-yard? Common sense would whisper that, if infection reside about the bodies, it would surely be more efficient when collected and condensed into a focus. But common sense has nought to do with some of the regulations upon cholera.

And then again the cere-cloths, and the wrappings, and the speedy burials. Against whom are these *enforced*? Against the rich? Oh no! The policeman enters not the titled hall, and the pestilent corpse of the fashionable lady is not borne off by watermen paid five shillings per head, for their damnable profanation of the feelings of surviving parent or child.* Had another, and a conciliatory course been adopted, had the feelings of the people not been scarified, their evil passions roused, and their fears exasperated, by the regulations which have at former times been promulgated, the cholera might not have been rendered less fatal, but there would at all events have been more good will, more community of feeling between the rich and the poor, and greater resignation in the latter to the evils inseparable from their lot. We take this opportunity of observing, that the Board in their last circular have certainly disavowed all wish or attempt at coercion, and allowed that, except under particular circumstances, the attendants of the sick need feel no alarm, nor apprehend any danger from infection.

We have thought it might be useful to throw together the substance of the many communications on cholera that appear in the weekly journals. Our readers may possibly be reminded of the facetious gentleman who kept a basin on his knee at a dinner party, and privately deposited in it whatever he was asked to eat and drink. When the cloth was about to be removed he exhibited his basin with its contents, and asked the company what his stomach must be composed of to digest such a heterogeneous and contradictory mixture. Our readers may apply this story as they please.

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* A magistrate directed twenty watermen to be procured, to carry off and bury by force the corpse of a cholera patient in Seven Dials. Even the police had refused the abominable office. And yet we wonder that the lower orders are excited.

Excerpta Choleralogica.

I. SALINE INJECTIONS INTO THE VEINS.

THE well-known fact that, in cholera, the serous and saline parts of the blood are rapidly thrown out upon the mucous surface of the bowels, naturally enough suggested the idea of supplying the loss by direct injection of a sero-saline kind into the veins. To throw such a fluid into the stomach or bowels, where it was already in superabundance, and at a time when all powers of absorption are suspended, appears the wildest and most absurd scheme that ever was invented, as the result has shewn. Contrary to expectation, the saline injections were not only borne with apparent safety, but, in almost every instance, produced a speedy, and as it were, a resuscitating effect on the whole system, restoring the pulse, the temperature, and the plumpness of the body. The prospect was too flattering to be realized. Such a gigantic power over disease—it might be said over death, was more than Nature would permit, and accordingly we find two important draw-backs on the new remedy. Either the fluids run off by the bowels with more rapidity than ever—or the head or lungs become oppressed, and death takes place in a different manner than by cholera. Of both these events we have seen the most unequivocal and incontestible proofs. While therefore we bear testimony to the astonishing—the almost miraculous physiological effects of the saline injections, we are reluctantly compelled to bear witness to the pathological phenomena which succeed. We are grieved to say that, in our opinion, a remedy is yet to be sought for the collapse of the epidemic cholera. Till this be found, our only resource is vigilant attention to the first stage or diarrhœa, with which the disease almost always commences, when a milder form of the flux does not precede. We are now to notice some communications from practitioners on the subject of saline injections.

Dr. Lawrie, of Glasgow, whose able work on cholera we have already noticed in this Journal, has stated the results of his observations in the Medical Gazette for June 7th, 1832. Following the directions of Dr. Latta, he injected from 70 to 150 ozs. within a few hours —and all his patients died, viz. six in number. In all of these temporary benefit was produced; "but in several the fatal result seemed accelerated." In one case he then tried the addition of albumen to the saline injection—in another the serum of bullock's blood—in a third, human serum—in a fourth, human blood—in two cases, small quantities of whiskey—in two, a few drops of laudanum—still *all* died. Dr. L. then began to suspect that the quantities injected were too large, and they were limited to 30 ounces at a time, thrown in very slowly, and carefully watching the effects. Under these precautions, four have recovered; "but so many have died in despite of all precautions, so evidently injured by the practice, that I have now almost entirely laid it aside, as not only useless but frequently hazardous." Dr. L. injected 26 cases, 22 of which died! Dr L. witnessed the phenomenon to which we have alluded—the drain of fluids from the bowels as fast as the injections were thrown into the veins. One patient made this remark—"as fast as you put water in my veins, it runs out by my stomach."

II. Mr. Buchanan, of Hull, in the same journal, has communicated some remarkable instances of cholera cured by somewhat unusual means. He premises his cases by stating it as his conviction that "this disease arises from malaria, sui generis, combined with a certain state of the atmosphere which acts with fatal rapidity on the human frame." The following recipe is that which has been so successful in the hands of Mr. B.

℞. Ol. oliv. ℥j.
Tinct. acet. opii, gt. xc.
Ol. cinnam. gt. xx.
Tinct. iodinæ, gt. x.
Sp. vini rectif. ℥j.
Spir. æth. sulph. ʒj.
Tinct. acaroid (?) ʒij. Misce ft. mistura.

One-half of the above mixture, (to which was sometimes added tinct. assafœtid.) was given at once, and the remainder in half an hour. In very urgent cases he administered the whole at once, using external heat and the usual means at the same time. In 24 cases there were only three deaths. Either the remedy is peculiarly efficacious, or the cases were of a milder description than we have been accustomed to see. But the fact is, that if cholera cases are seen early, very trifling remedies will be often successful; whereas, if the collapse has commenced, the most vigorous means will fail in nine cases out of ten.

III. BANDAGING THE ABDOMEN IN CHOLERA.

This is among the newest proposals for the intractable epidemic. It is founded on a mechanical rather than a physiological idea. In *one* case, the only one in which it was tried, Mr. Bowden, of Sloane Street, "found a compress and tight bandage to the whole abdominal surface effectually restrain the *serous hæmorrhage* from the bowels; and, as a farther and more remote consequence, but an important one, perhaps, restore the secretion of urine." Calomel and opium, with the saline medicines, were used at the same time. Whatever efficacy the tight bandage may possess, we conceive the expression "serous hæmorrhage," one of the best that has yet been applied to the disease, even although it does express an inconsistency in denominating a flow of blood a flow of serum.

IV. ANODYNE PASTE FOR CHOLERA.

Dr. Williams, President of the Ipswich Central Board of Health, has published a small pamphlet, with the view of recommending an opiate paste, in the form of suppository, in the treatment of cholera. Its effects have been "so strikingly salutary, so immediately remedial, and eventually so successful, that he dares venture to congratulate the suffering community on its discovery." It consists of "one drachm of the best soft crude opium not dried or powdered, and seven drachms of hard soap, which being intimately blended and well pounded in a mortar, forms a solid paste, of which the quantity introduced into the rectum on each application, is about 2½ grains of soft opium and 17½ grains of soap. The paste should be conical in shape, like a suppository. If the bowels be severely excited, it will be desirable to delay the application of the paste till some pause or relief in such excitement take place, or till after such exhaustion or weakness be felt." Several cases illustrative of the efficacy of this suppository are related by Dr. Williams.

V. COLD WATER OR NOTHING IN CHOLERA.

It will have been seen by the two or three last memoranda that Dr. Lawrie cannot cure cholera by saline injections—that Mr. Buchanan cures it by stimulants and iodine—Mr. Bowden by bandaging the abdomen—Dr. Williams by an anodyne suppository. The next gentleman who appears upon our list, Mr. French, surgeon to the St. James's Cholera Hospital, whose pamphlet is now before us, hints that all such is *improper* treatment. "The patients to whom he gave internal stimulants died, and the application of heat to the whole surface he has found to increase the collapse!" Here we are brought to a pretty pass. One by one all our remedies have been cut away from under our feet, and even warmth to the surface and frictions, the hencoops to which we had clung in the sea of uncertainty into which we have been tossed, are found to bring destruction rather than safety! Mr. French protests against astringents and against calomel, because they have "not altered the mechanism of the disease." The means which Mr. French, for he is not very explicit, appears to recommend, are large draughts of cold water, or nothing at all. In the most severe case which he relates, at least the most severe of those in which recovery took place, the patient obstinately refused all medicine, and even drink, from the fear of its containing medicine. We know not whether this is meant as a sly hit at the numerous cures of cholera that appear in every journal, but whether it be so meant or not, it may certainly be so applied. Mr. French would suggest, that "the treatment be of that simple kind, which is not likely to interfere with the processes which he has assumed to be resorted to by Nature for the recovery of the patient." By all accounts, the French mode of treatment, we really intend no pun, is simple and expectante enough, yet we are not struck with any marvellous diminution of mortality thereby. However, Mr. French recommends cold water; and we shall feel delighted if cold water will do what its advocates anticipate. In order that Mr. French's practice may be clearly seen, we shall mention his treatment of two cases detailed by him. The first patient was a young girl. She was ordered mustard poultices to the spine and scrobiculus cordis—4 grains of common salt, 4 of carbonate of soda, and 2½ of nitre every hour, and 2 grains of calomel every hour also, with cold water ad libitum. Another case was treated by sinapisms to the spine and epigastrium, hot-water bottles to the feet, and cold water ad libitum.

VI. NARCOTIC GLYSTERS IN CHOLERA.

These are recommended in the Medical Gazette, for July 21st, by Mr. Hallett, of Devonport. He proposes gtt. x. to xx. of tinct. opii, in ʒij., ʒiij., or ʒiv. of water; or from one to two grains of crude opium in watery solution, thrown up by means of a small brass syringe, with an ivory pipe.

VII. SUCCESS OF MURIATE OF SODA IN CHOLERA.

It becomes quite a pleasing task to peruse papers on cholera. The disease is stripped of its terrors, and every communication breathes nought but success. We wonder at the perversity of the Central Board, in publishing those infamously-incorrect lists of deaths and recoveries which meet our eyes in the newspapers. In the Times of Sept. 14th, we see, cured, 330—dead, 143. How is it possible that the proportion of deaths can be as high as stated, when almost every medical man has a successful method of his own. There is reprehensible error somewhere. However, when these excepta choleralogica are published, and gentlemen see how many successful plans of treatment there are, we do hope that the lists will exhibit a perceptible difference.

Dr. Pidduck's plan is to give the muriate of soda. We give his directions in his own words.

"After the ordinary preparations are made for favouring the restoration of heat to the extremities, and promoting a profuse perspiration, by putting the patient to bed in a flannel shirt next his skin, wrapping him up in hot blankets, covering him with plenty of bed-clothes, and applying large stone-ware bottles, filled with hot water, to his feet and sides, one ounce, or two tablespoonfuls of common salt, dissolved in eight ounces of warm water, is to be administered. The patient's head is then to be covered with the bed-clothes, and on *no account* is he to be permitted to rise. Half an ounce of salt, dissolved in four ounces of cold water, is to be given every hour till a copious vomiting and purging of bile is produced, and a profuse sweat breaks out. It has rarely been found necessary to repeat the salt more than three times. After the free evacuation of bile by vomiting and purging, the blueness of the skin gradually vanishes, and when the perspiration subsides, the tongue loses its cold, moist, livid character, and assumes a dry yellow, or brown appearance, with a red margin, and the patient *suffers from intense thirst*. He also frequently complains of acute pain in the ears, and of tenderness in the epigastric region.

For the relief of these symptoms,

one or two drachms of oleum ricini, repeated every six hours, to carry off the vast accumulation of bile, the citrate of potass, with a few grains of carbonate of soda, in a state of effervescence, repeated every three hours, and the application of a few leeches behind the ears, or to the epigastrium, are generally sufficient. To allay the thirst, let him drink moderately of thin gruel, soda-water, or even cold water, which, instead of retarding, seems to promote free perspiration, and the abundant discharge of bile, upon which his safety depends, and the retention of which appears to be the cause of all the distressing and dangerous symptoms."

It will be observed that Dr. Pidduck successfully employs what Mr. French has found to increase the collapse; nay, what must be Mr. French's horror, at observing that Dr. Pidduck terms the means of "promoting a profuse perspiration *ordinary* preparations." We are only chroniclers of facts.

VIII. Successful Prohibition of any Drink in Cholera.

Mr. Wilson, of New Street, Bishopsgate, is not a patron of cold water, nor of any water, nor of any fluid of any description whatever. In the Med. Gaz. for Aug. 11th, he relates four cases of cholera in which the patients were totally prohibited from drinking water, or any other fluid. Their suffering from thirst, he tells us, was dreadful, and it was grievous to hear one cry out feebly for *a drop of water—a drop of water*. Mr. W. is satisfied, "that had she been indulged in her wish, she would have died." Of this we are rather sceptical, and when we take a glance at our excerpta, we cannot but suspect that it signifies not much whether patients drink cold water or let it alone, saving and excepting the gratification or endurance of a tormenting thirst. This, however, is a speculation. As we have mentioned what Mr. Wilson will not let his patients have, we ought to mention what he will. In the first case, which was successful, his treatment consisted of all possible external stimulants—opiates in the first instance, with solutions of liquor potassæ in water—and subsequently mild aperients. The treatment appears, so far, to have been judiciously based on general principles, in the absence of any specific remedy.

IX. Mortality from Cholera in London.

Dr. George Gregory is an exact man, and likes to see things stated arithmetically. We would venture, now, that he possesses the organ of numbers, albeit we know that he shews no love for the phrenological craft. Whether this be or be not true, certain it is that Dr. Gregory is a regular investigator of the Bills of Mortality, though we hope he does not contribute towards them. Dr. G. is not like the surgeon in Gil Blas, who, after running out at the back-door to stab a man, sallied forth from the front to offer his professional assistance. The result of Dr. Gregory's last inquiry, is contained in a short note to the Editor of the Medical Gazette.

"In the sixth volume of the London Medical Gazette (page 691), I submitted to your readers an analysis of the London Bills of Mortality for 1829; wherein it appeared that there died in the metropolis that year, of what are commonly called *bowel complaints* only forty-one persons—viz:

Of Diarrhœa	31
Of Dysentery	6
Of Flux	4
Total in 1829	41

In the year 1830, the number of deaths by the same disorders are stated as follows:—

By Diarrhœa	19
By Dysentery	24
By Flux	10
Total in 1830	53

The term *cholera morbus* appears in these bills, for the first time, on Tuesday, 21st December, 1830; and the first death by such a disease is recorded in the following week. The total number of deaths by bowel-complaints, in the year ending December 20th, 1831, is thus given:—

By Cholera Morbus	48
By Diarrhœa............	33
By Dysentery	11
Total in 1831	92

Of the total number of deaths by cholera morbus in the year 1831 (48), there took place,

Prior to August		12
In the autumnal months,		
August	10	33
September .	13	
October ..	10	
Subsequent to October		3
Total in 1831		48

The following table exhibits the deaths by cholera morbus in the first six months of the present year:—

In January	0
February	25
March	250
April............... ..	273
May	52
June	67
Total in the first six months of 1832	667

The next table gives the deaths by cholera morbus in the month of July, as registered in the Bills of Mortality The result will probably prove as great a surprise to your readers as it has done to me.

In the week ending July 3, 1832.	55
——————— 10.... ..	108
——————— 17......	158
——————— 24. .. .	380
——————— 31......	305
	1006

The concluding table gives the total number of deaths by bowel complaints, in the first seven months of 1832:—

By Cholera Morbus	1673
By Diarrhœa	25
By Dysentery	12
Total in the first seven months of 1832	1710

These statements afford, I think, a pretty satisfactory proof that the precautions of Government have not been unnecessary, and that the anxiety of the public mind has not overstepped the bounds of reason so far as some *philosophers* would induce us to think."

Dr. Gregory, like Mr. Cobbett, would seem to have a great dislike for the *feelosofers*. Why Dr. G. should be so hard on them we do not know, but the miserable men may exclaim, in the words of the song,

> "Perhaps it is right to dissemble your love
> But why should you—kick us down stairs?"

When Dr. Gregory thinks this a satisfactory proof that "the precautions of Government have not been unnecessary," we confess that we feel some misgivings as to *his* philosophy. According to his own shewing, there have been 1710 deaths from cholera in seven months, out of a population of at least a million and a half, and by far the greater part of those 1710, it must be remembered, taken from the poorest of the poor, and most debauched of the debauched. Precautionary measures, if they mean any thing, mean preventive measures, and it remains for Dr. Gregory to shew, that those preventive measures have effected any good, or made the mortality less than it would otherwise have been. The precautionary measures actually enforced were chiefly quarantine restrictions. Have *they* been of any service? have *they* kept the disease out? It laughed at them and their admirers. The precautionary measures, proved by 1710 deaths in London not to have been unnecessary, were totally inoperative, as all who have eyes in their heads must see, in preventing the rise or progress of cholera, but very operative indeed in inspiring panic, crushing commerce, and heaping additional poverty and distress on a pauperized population. It is true that, had the wishes of Dr. Gregory's party been carried into effect, *some other* precautionary measures would have been resorted to. Cordons of police and of soldiery would have been formed in this good city of London—parishes would have been declared infected, and cut off from communication with neighbouring parishes—a red cross would have been chalked upon our doors, and "Lord have mercy on us" might have been added, as in the time of the plague. All this, and more, would have been done by those who, perhaps properly, sneer at philosophers, and what would have been the consequence? Let the riot at Manchester tell.

In making these remarks we intend no personal affront to Dr. Gregory. He is too good-natured to care for a little sparring when he puts on the gloves. We should indeed be much to blame if we said any thing to hurt the feelings of a gentleman, whom his very enemies, if he has any, allow to bear a retort with the most perfect good humour. At the same time Dr. G. may suppose that nobody likes now-a-days to be called a *philosopher*.

X. SALINES NOT SUCCESSFUL IN CHOLERA.

In the same number of the Medical Gazette as that which contains Dr. Gregory's letter, we find a record of four cases from a public institution, (name not mentioned,) in which salines were exhibited without the least success. These were really severe cases, and, as we observed in our review of Dr. Stevens' book, the patients might as well have had so much ditch-water. The gentleman who relates the cases observes, "the failure of the above treatment in these cases caused us to relinquish the plan altogether"—a very sensible resolution. As we hate to read of unsuccessful treatment, we shall pass to some other plans.

XI. DR. LINDSEY'S OPINIONS ON THE TREATMENT OF CHOLERA.

Really, so far as we have gone, we think Dr. Lindsey's brief observations on the treatment of cholera by far the most practical and sensible of any we have had occasion to notice. To clear our way and shew what he does not recommend, we must observe that "the saline treatment has been fully tried at his cholera hospital, and found unsuccessful"—that saline injections into the veins have been tried in two cases, and failed—that hot water has been tried and failed. Dr. Lindsey does not seem to have tried cold water, he would probably have placed it in the same category. Most of the cases sent to the hospital are in a state of collapse. Dr. Lindsey employs stimulant emetics in the first instance, with sinapisms to the epigastrium, and hot salt to the feet and back, followed by the *cautious* use of the lancet, and afterwards calomel in moderate doses. This treatment is adapted to cases in their commencement, that is, in the commencement of grave symptoms.

"In the cases of collapse the indication seems to be to give an impulse to the arterial system, which I conceive is best effected by producing energetic vomiting. With this view the mustard emetic is given in all cases where re-action has not been already established; and at the same time the external stimulants mentioned above are employed. After the operation of the emetic, the carbonate of ammonia in solution is given in doses of a scruple, at the intervals of a quarter or half an hour, or an hour, according to the intensity of the collapse. Calomel is now used in ten grain doses, the *first* being *sometimes* combined with a grain, or a grain and a half, of opium. This plan is followed up by three grain doses of calomel every second hour, which are persevered in until biliary evacuations are established. Should the ammonia not be rejected, it is continued until re-action takes place, and then omitted. Great circumspection is required in the use of this stimulant, as, if too long persevered in, it will induce cerebral congestion."

When re-action is violent, general and local bleeding should be used according to circumstances—for great irritability of the stomach, leeches to the epigastrium, warm fomentations, a blister, effervescing draughts with opium, or mustard emetic. Opium is not used in large quantities from its tendency to increase determination to the head. The drink of the patient *should be regulated by his feelings*, and may be bottled ale, cider, soda water, wine, brandy and water, or spring water. Dr. L. speaks highly of ale.

XII. TREATMENT OF CHOLERA AT LEEDS.

This is described in a letter from Mr. Birtwhistle in the Lancet for Aug. 25. Mr. B. states that saline injections have been tried, found to fail, and abandoned. Mr. Morley, resident surgeon of the Hospital in Marsh-lane, Leeds, used the salines, after Stevens' fashion, but had not seen enough to determine their value. "This was prior to the exposure of the cases in Cold-bath-fields prison." The treatment actually pursued was nearly the same in Leeds and York.

"When a patient was admitted in the collapsed stage, tins containing hot water, and suitably shaped, were applied to the abdomen, back, and feet, the body being previously surrounded with a blanket. These retain the heat for a long time, and had been found to answer better than any kind of bath in restoring the natural temperature. Should the prostration of strength be extreme, reaction was assisted by the internal administration of strong stimulants, consisting chiefly of ammonia and camphor. A scruple of calomel, uncombined with any other medicine, was then given every hour, until the severity of the symptoms had abated. The quantity was then lessened, and the interval between each dose increased. Six or eight doses had been generally sufficient to arrest the vomiting and purging, and to excite the biliary secretion. It had rarely been necessary to push the mercury to salivation, although I think it would be advisable gently to touch the mouth, with the view of lessening the consecutive fever."

At the York cholera hospital re-action was promoted by the enema of spirits of turpentine, in a mucilaginous mixture, six ounces being thrown up in extreme cases. We have seen one patient recover from the stage of collapse who took turpentine per os et per anum. Drs. Goldie and Anderson speak favourably of the medicine. Mr. Teale avoids much opium on account of the secondary affection of the head. The majority of the medical men in Leeds and York are non-contagionists.

XIII. CHOLERA CURED BY CALOMEL AND OPIUM.

Mr. Dobson, a very intelligent surgeon of Pimlico, has related a case of this description. The patient was almost in extremis when he saw her. Heat was applied to the surface and the whole body rubbed constantly with warm turpentine. Large quantities of brandy were given, and cal. ℈i. with opii, gr. ij. every half hour. Besides this an enema of starch and tinct opii, ℥ss. was administered. As the patient rallied the doses of calomel and opium were diminished. She recovered perfectly.

XIV. A LOGICAL DEDUCTION.

Dr. Weatherill, of Liverpool, injected into the veins of a man labouring under cholera, four hundred and eighty ounces of saline fluid. Strange to say, the man recovered. However, Dr. Weatherill declares that his own opinion of saline injections, *from this single case*, "is exalted, and he should not think he did his duty if ever again he *suffered* a patient to die of cholera, without using it." He sums up thus;—"any medical man who does not (use injections) will excuse me for passing severe judgment on his conduct." This is modest with a vengeance. So every medical man is to prostrate his judgement, his reason, his experience before Dr. Weatherill, or excuse him for censuring him severely, if he does not. It matters not that others may reason differently, or have a larger experience in this mode of treatment; they must employ injections at the pain of Dr. Weatherill's displeasure.

XV. COLD WATER IN CHOLERA.

This, at the time we are writing, Sept. 10th, is the last plan recommended for the treatment of cholera. It is contained in a communication from Dr. Hardwicke Shute to the Board of Health, and has been transmitted by the Board to the Lancet and Medical Gazette. The quantity of cold water taken "in the most marked cases of recovery," was as much as some gallons in a few hours. Dr. Shute adds to this the abstraction of all kinds of stimulus external and internal, even to the exclusion of friction or of the application of heat in any form. Dr. Shute does not shuffle—he says broadly and boldly that the treatment is to apply to the second and particularly to the third stage of cholera, "when the pulse at the wrist has ceased, or become nearly imperceptible." This is manly and honourable. Dr. Shute does not say, like Dr. Stevens, that the premonitory diarrhœa is not curable by ordinary means, and then laud his method for curing it. All is fair and above-board with Dr. Shute;—"if my remedy does not succeed in the really bad cases, reject it." Dr. Shute not only applies cold internally but to a certain degree externally also. The following is this able and benevolent physician's practice.

"The windows of the apartments, at the Cholera Hospital in Gloucester, are large and numerous in proportion to the size of the room, and the door which opens immediately into the garden, is seldom shut. The windows are open day and night, so that the patient may be considered as living in the open air, and the fire is kept so low as not to influence the temperature of the room. The covering of the patient is confined to a light blanket or rug; and it seldom happens that some part of the patient, particularly the breast and shoulders, is not constantly exposed. Under these circumstances, a pint of cold water is offered to the patient, and very frequently two-thirds of this are taken at a draught. In what I consider the most favourable cases, vomiting is almost immediately produced, and the patient in two or three minutes again calls for and eagerly drinks the same quantity, with the same results. This is often continued for hours, until gallons of water have been taken, and the greatest proportion, but I conceive not all, is rejected. In other cases the patient is too insensible to ask for water; and under these circumstances, it is offered every ten minutes or quarter of an hour, and most commonly drunk with avidity. If gruel or tea be offered, the patient most frequently refuses it; and, generally speaking, no kind of nutriment is taken in any form until the period of convalescence. In the first six or eight hours no amendment can be observed. In the next six or eight hours there is some diminution of intensity in the purple hue of the extremities. In the next six or eight hours there is a manifest improvement in the countenance of the patient, and increased disposition to sleep. In some cases the pulse has not been perceptible for twenty-four or thirty-six hours. From this period the pulse, the animal heat, and the secretions, are very gradually restored; and at the end of forty-eight hours, on the third day from the commencement of the plan of treatment proposed, the patient is convalescent; and in all cases without consecutive fever. I mention these circumstances particularly, in order that the practitioner may not be impatient: he should make not the least alteration in the plan laid down, as long as the patient is merely not getting worse."

Dr. Shute observes that he has tried this plan in twelve consecutive cases with success. It is not consistent with our plan to indulge in elaborate criticisms in these excerpta. Our object is rather to collect facts. When we look back at the various methods that have been proposed, considered by their proposers successful, and on trial abandoned, can our readers blame us at expressing scepticism; will they not become sceptics themselves? When we see the most clashing theories and most opposite plans of treatment equally enthusiastically advocated, we cannot but suspect, that all are equally or nearly equally inefficacious. Amidst all this glitter of success the general lists shew no diminution of relative mortality, on the contrary they exhibit an increase. When the epidemic first appeared in this country, one method of treament was pretty generally pursued. Latterly we have had experiment on experiment hot water and cold water—bleeding and —stimulants—calomel and opium and salines — frictions and no frictions— drink ad libitum, and no drink at all.

Here is confusion worse confounded, and we scarcely hesitate to say, that in point of principles of treatment and practice, we are worse off now than we were twelve months ago. The cold water treatment is the last, and sanguine persons may believe that it is the best: unfortunately we are not sanguine.

In a disease like the present we would not discountenance rational and cautious experiments, far from it. But we would discountenance and reprobate most strongly premature declarations of success, and dogmatic abuse of all who do not yield implicit faith to what is written or said. Look, for instance, at the manner in which many of the advocates of the saline treatment have attacked and are attacking those who have opposed or have not assented to their views. Can any thing be more disgraceful? It is certain that truth will in the end prevail, and fallacy be as signally exposed. Dr. Shute behaves like a man of science and candour; all he expects his statements to lead to, is "a more extensive trial of the plan proposed." This is as it should be.

XVI. M.M. FOVILLE AND PARCHAPPE ON THE CHOLERA AT ROUEN.

These gentlemen have written a sensible and interesting pamphlet. We cannot of course give even an abstract of it, but may mention one or two facts related by the authors. They had the charge of the cholera hospital at Rouen. The epidemic broke out in Rouen early in April, 1832, but owing to popular prejudices, no patients were received in the establishment until the 13th. This establishment appears to have been an asylum for the insane, situate on the left bank of the Seine in an apparently healthy situation. The total number of cholera patients was 78, of whom 38 died, 37 recovered, and three left the house before the issue was determined. There is another fact deserving of great attention, but too often lost sight of by those who treat, and those who weigh the value of the treatment of, cholera. The disease lasted 32 days in the asylum. In the first eight days there were 36 patients, and 23 deaths—in the succeeding 16 days there were 31 patients and 15 deaths—and in the last eight days 11 patients and no death. Here we see the rate of mortality progressively diminishing, from the first quarter of the epidemic's duration. Had Dr. Stevens arrived with his salines during the last quarter, when 11 cases occurred without a death, what a buz would have been made! The French reporters, however, are too candid and too sagacious not to see that the diminution of deaths was rather owing to the laws of the disease itself, than to the influence of treatment.

The reporters draw attention to another subject, the propagation of the disease within the asylum. The cholera wards were on the ground floor of the centre of the building; the upper stories being inhabited by the insane. Of the latter, 26 were attacked with cholera, 25 of whom inhabited the part of the building appropriated to the cholera patients. It was also found that most were seized in the dormitories nearest the cholera-wards, and, with one exception, the farther these were removed from each other the more rare were the attacks. Amongst the employés of the asylum only one was attacked — the cook. He lived in the centre of the building. Of thirty-three *religieuses* who attended the sick, ten were attacked and three died.

From these considerations the reporters think they are justified in pronouncing, that "under the influence of the epidemic constitution that gives rise to cholera, persons inhabiting the vicinity of a collection of cholera patients are more likely to contract the disease than those removed from it."

We think this a fair expression of the facts of the individual case, and were the same thing generally noticed, it would also be a fair enunciation of a general law. But this has not been generally observed, at least there are very many recorded instances in which it was not; a circumstance which will tend to diminish the general applicability of the principle. At the same time we think that facts so well authenticated and so candidly stated should make men hesitate before they subscribed to the doctrine of absolute non-contagion.

In their resumé the reporters observe that the cause of cholera is yet a problem—that its seat is essentially in the digestive apparatus—that certain organic alterations constantly exist, and that their seat is in the same apparatus—that these alterations consist, first of a considerable defluxion towards the mucous membrane, and development of the glands of Brunner and Peyer, with extreme secretion of a particular fluid, followed by various degrees of inflammation of the membrane and of the follicles—that these alterations and the symptoms proceed pari passu—that in the absence of a specific, hitherto undiscovered, we must be guided by general principles and by the facts already mentioned—and that the true method of treatment should therefore be antiphlogistic, though not actively so.

We might proceed farther with these Excerpta, we might advert to contagion and to other topics, but we will desist. All parties should be anxious to apply the most successful treatment. We have therefore received with much pleasure the following circulars addressed by the Board of Health to all medical men who have the charge of patients affected with cholera.

(No. 1.) *Council Office, Whitehall,*
3d Sept. 1832.

Sir,—The Central Board of Health being anxious to obtain, from authentic practical Sources, short Outlines of the different Plans of Treatment in Cholera which may have been considered most successful; I am directed to request that you will have the kindness to submit the enclosed (No. 2.) to the Medical Members of your Board, and to any other Medical Gentlemen in the Neighbourhood who may have had extensive Practice in the Disease.

You will also request the Medical Gentlemen in charge of Cholera Hospital to fill up, and forward through you, a Return of the following Form, for each of these Establishments within the District under the Superintendence of your Board.

I am, Sir,
Your most obedient Servant,

To the Secretary of the
Board of Health of

Return of Patients admitted into the Cholera Hospital at ____________
From __________ to ________ 1832.

Total Numbers.			
Admitted.	Died.	Recov.	Remarks.

(Signed)

(No. 2.) *Council Office,*
3d Sept. 1832.

Medical Gentlemen, who have had Experience in the Treatment of Cholera, and are of opinion that they have been successful in their Practice, are requested to forward to the "Secretary of the Central Board of Health," under Cover to "The Clerk of the Council in waiting, Whitehall," a short Account of their respective Methods of Treatment of the Epidemic:

1st. When in the Form of Bilious Diarrhœa.

2d. In that of Rice-water Evacuations.

3d. In the Stage of Collapse.

We are convinced that if the Board follow up this plan—if they carefully procure and make known to the profession the results of treatment—if they issue short and simple directions to the public, especially the poor, as to what they should and what they should not avoid—if they calm terror and distrust by ceasing even to hint at restrictive measures which, if carried into effect, could do no good, but which really cannot be carried into effect at all—if they religiously abstain from violating the ties of kindred and feelings of affection by cruelly sanctioning the dragging away of the bodies of the dead, or by encouraging the mummery of separate burial places—if they rather invite than compel the transportation of the sick to cholera hospitals—if they treat with urbanity the representation of those who differ from them in opinion, and do not dogmatise when they fail to convince—if they do this, we say, they will deserve and gain a popularity which they have not yet enjoyed, and will contribute to establish a kindlier feeling between the parties who have differed so widely and even so bitterly on cholera.

XLIX.

MENSTRUATION IN DIFFERENT COUNTRIES.

IN Part X. of "The Principles and Practice of Obstetric Medicine," lately published, Dr. Davis considers the anatomy of the uterus and its appendages, and enters on the subject of menstruation. From the remarks on this function we are tempted to select those on the differences observed in different nations and climates. It is generally known that the period of puberty is earlier attained in the warm regions of the South, and in "the lands of the sun," than in the chilling North, or even than in temperate climes. But Dr. Davis has collected some facts and illustrations, not quite so familiar as the general doctrine.

"In the more fervid climates of Asia and Africa, the women arrive at puberty at ten years of age, and not unfrequently at nine. Some years ago an English gentleman resident at Malta, who there occupied a distinguished post under the Government, favoured the author with the fact, that the native girls of that island sometimes marry before they attain even the latter age, and generally within a year or two afterwards. It is a matter of history, that the celebrated prophet of the Moslem faith consummated his marriage with one of his wives 'when she was full eight years old.' 'And now Khadija his wife being dead, after she had lived twenty-two years with him, to strengthen himself the more, he took two other wives in her stead, Ayesha the daughter of Abu Beker, and Sewda the daughter of Zama.'——'Ayesha was then not six years old, and therefore he did not take her into his bed till two years after, when she was full eight years old. For it is usual in those hot countries as it is all India over, which is in the same clime with Arabia, for women to be ripe for marriage at that age, and also to bear children the year following.' Prideaux's Life of Mahomet, p. 30, 1718. We are on the other hand informed that in Sweden, Norway, and a great part of Russia, menstruation does not often take place till the more stayed ages of seventeen or eighteen. In reference to this latter fact it might seem open at least to a presumption that so much absence of alacrity to engage in a function so essential to reproduction, as in the sequel we shall find menstruation to be, might have an unfavourable effect upon the population of the countries of the north. The facts of history are, however, directly opposed to such a conclusion; and the explanation seems to be, that in those countries, the duration of the function comprehends a more extended series of years; that the women are strong and well constituted; and that they therefore are competent to menstruate more regularly and during a longer portion of their lives than the women of the south: whence it results that in the end they are found more prolific, and that under favourable circumstances as to the means of living, they become the parents of a healthier and more vigorous offspring. We are accordingly informed by Rudbeck and other writers, that the Swedes have usually families of ten or twelve children, AND NOT VERY RARELY a progeny equal to more than twice these numbers. It should not therefore seem surprising that the population of those countries, in other respects so unproductive, was become so superabundant during the Goth and Vandal times as to have been competent to furnish entire armies of adventurers, first to conquer and finally to colonise distant and more favoured regions. But let us reverse the picture. M. Virey, in his article on climate, in le Dict. des Sc. Medic. observes that the burning climates of the more southern countries of Europe are well known to produce 'strongly-marked nervous temperaments and great precociousness of puberty. Hence,' he adds, 'the women of those countries have scarcely grown out of their infancy before they become mothers. But, mark the consequence: just like those perishing flowers of a day which the ardour of a summer's sun causes to open in the morning, and in the evening to wither and die, they soon lose their fecundity, and pass rapidly from the morning of their lives towards its decline and close.' This fact is well understood by the English inhabitants of India, who all send their children to England, in order to avoid the known effects of the climate of India in the production of precocious developments; but developments too premature to be permanently compatible with vigorous health, and almost certainly inductive of an early death.'

Again the quantity of the menstrual secretion is, as might perhaps be anticipated, materially affected by the climate and habits of life.

"With respect to the influence of climate in this matter, we meet with no great discrepancies of opinion amongst practical writers; it being something more perhaps than a very general presumption that women menstruate less abundantly in hot than in more temperate regions, and somewhat more abundantly in the latter than in the coldest countries of the north. This difference is attributed to the balancing influence of the cutaneous function of perspiration. 'In hot climates,' says Buffon, 'where the TRANSPIRATION is greater than in cold countries, the catamenial secretion is less.' Hist. Nat. de l'Homme, tom. iv. p. 491. 'In general,' Maigrier observes, Dict. Medicale, tom. xxxii. p. 386, 'the women of the south have their periods less abundantly than those of the north; but we may remark that those who live under the equator, as well as those who inhabit the most northern countries of the globe, have scarcely any traces of them. With respect to the former, their fluids are so volatilized by the excessive heat of their climate as to become insufficient to furnish the means of a menstrual secretion; and as for the latter, the rigour of their cold is such as, by constringing all their natural filters, to produce similar results.' The author is very doubtful whether M. Maigrier, in respect to the total absence of the menstrual function in the extreme northern latitudes, has not considerably overstated his case. Women of nervous and irritable temperaments, otherwise sometimes called bilious and melancholic, menstruate abundantly, sometimes profusely; whilst, on the contrary, with those of robust and well-steadied constitutions the secretion usually appears in sparing quantity, as also in the cases of persons of feeble and cachectic health who begin to menstruate late, and who perform the function difficultly and painfully. Females who live in towns, and who have frequent opportunities of engaging in the public pleasures of gay and fashionable society, exposed to all the temptations incident to the possession or accessibleness of whatever means may be calculated to exalt the imagination, to inflame the passions, and, by excessive or too frequent indulgences, to abuse the appetites, are in most cases the subjects of precocious, profuse, and morbidly irregular menstrual discharges. On the rear of the same class of females, and therefore subject to the same evil results, are the idle, the unfortunates, and the dissipated in all ranks of society. 'All the arts,' says Gardien, 'such as music and painting, including that of design, excite vividly the imagination. Music especially, cultivated too exclusively and at too early a period, develops an extreme sensibility. It was to an imprudence of this kind that we have heard attributed the death, on the approach of puberty, of both the daughters of Grétry, the celebrated musician.' Women of naturally strong passions, all other things being equal, are said to menstruate more abundantly than those of colder temperament, and such are indifferent to the privileges of connubial life. The evacuation is moreover less abundant with the average of women who live in the country than with a large proportion, as we have already seen, of such as inhabit great cities and towns, not only because the atmosphere of the country is more uncontaminated and salubrious, but because also its inhabitants are usually more regularly and usefully employed, and exempt from the profligate vices of great societies. The produce of the catamenial function becomes ordinarily less abundant with advancing life; and the same thing is true, but on a smaller proportional scale, in the instance of some mothers of numerous offsprings. A first gestation has sometimes improved the character and habits of the function; but there is reason to fear that such an advantage is not generally to be calculated upon. On the contrary, it may be admitted as an axiom founded on extensive observation of the phenomena of the function, that if it be performed imperfectly, painfully, or otherwise irregularly, during the first few years of the menstruating part of a woman's life, it will continue to be so performed throughout the remainder of it."

We have already, and on more than one occasion, expressed our approbation of this work of Dr. Davis's, and have taken the liberty of pointing out what we consider to be faults. Let Dr. Davis endeavour to compress much matter into little space, not to swell little matter into monstrous bulk—let him make his style, what it is not, simple, clear, and concise—and for Heaven's sake let him curtail those prolix, though valuable cases, that, in some former fasciculi, have swallowed, like Aaron's rod, all rival matter. If he follows this advice, he will render his work creditable to himself, and really useful to the profession.

L.

CHOLERA.

THE Editor of this Journal, in a tour through England and Scotland, has had his attention a good deal directed to the prevailing epidemic. He was very much struck with the influence of locality in the production or extension of this mysterious malady. This influence, indeed, is so obvious, that any person, in the least conversant with medical topography, would almost immediately form a tolerably correct estimate of the extent of cholera in any town or village through which he passed. Thus, let us look at Edinburgh: The locality is very unfavourable to the production of malaria, and accordingly we find that, in the new town, there has scarcely been a case, and in the old town, the narrow wynds, where a local malaria is constantly generated, furnished nine-tenths of the cases. Upon the whole, Edinburgh escaped much more fortunately than Glasgow or Paisley, whose topography is very remarkably calculated for the production of malaria. Thus, in sailing up the Clyde, we are struck with the low and swampy grounds on the left bank of the river. The whole plain, indeed, between the Clyde and Paisley, is a flat alluvial soil, beneath the level of the river at spring-tides, and reminds one very much of the Scheldt, the Ganges, and other rivers, on whose banks the mysterious miasms of fever and various diseases are generated in such profusion. Liverpool, on arriving from the pure air of Cumberland and Westmoreland, assails the olfactories of the stranger in a very forcible manner. This second city of England is almost as malodorous as Rome or Naples in the dog-days! The aspect of the inhabitants, especially of the lower orders, is singularly unhealthy—and, altogether, one would predicate that this town would suffer severely from any epidemic connected with malaria.

Oxford is situated in a locality that is far from being an eligible one in this respect. The town is built on a flat, much lower than the surrounding country, and so intersected with canals, some fluent, others stagnant, that one would conclude that a colony of Dutchmen had settled here, and introduced the topographical features of Walcheren or Beveland into Oxfordshire. The cholera has here carried off 80 or 100 people. These are merely specimens, which correspond very closely with the general descriptions of those places where cholera has shewn its greatest malignity.

Let us look to some localities of a different description. Edinburgh has been instanced. The towns of Cheltenham, Leamington, Malvern, Warwick, Buxton, Matlock, &c. have remained totally free from cholera, and no places could present a greater contrast in medical topography, to those places already enumerated as malarious, than these last-mentioned towns. Cholera was brought, indeed, to Malvern, but the disease died with those who brought it there. It will be very surprising if Malvern suffers to any considerable extent. It is the very reverse of Gloucester, where the malady has committed considerable ravages.

Although cholera has now assailed a certain number of the respectable classes of society, both in town and country, yet, upon minute enquiry, there has generally been some local cause, or some error in diet, to excite the disease into activity. But when we consider how powerful the miasm of cholera has been in some places, we cannot wonder that the malady has assailed men in all ranks of society.

The eccentric manner in which the epidemic has pursued its course, or rather started from time to time into existence, is as remarkable in this as in other countries. Thus lunatic asylums were supposed to exempt their unfortunate inmates from the contagion of cholera; but this has proved an error. At the Bethnal Green Lunatic Establishment, and also at the "White House," upwards of an hundred cases have occurred, and proved very satisfactorily the spontaneous origin of cholera under a general epidemic influence. The two establishments mentioned, though adjoining, are completely separate, as to officers, attendants, &c. The first case that occurred in the "Red House" was a woman who had been long confined within the walls, and where all trace of contagion was impossible to be discovered. The medical superintendant of the "White House" appears to have taken "prudent precautions," by cutting off communication with the *red* mansion, and even the windows that looked towards the infected district were blocked up! But yet the cholera got into the White House. None of the medical men, nurses, burier of the dead, however, contracted the disease. It is curious that, during severe attacks of the epidemic among the lunatics, reason was restored—at least so our contemporary, the Medical and Surgical Journal, avers.

We may state here, on the authority of Sir William Burnett, that cholera suddenly broke out in the lunatic wing of Haslar Hospital, without any source of contagion, and as suddenly stopped in the midst of its progress, without being communicated to nurses, attendants, or others in the hospital.

The result of our observations, both in England and Scotland, confirms the fact that diarrhœa is the precursor, or rather the first stage of the epidemic. In nineteen out of twenty cases this is the beginning and end of the disease—and where early attended to, the complaint is easily managed. When collapse is allowed to occur, the great majority will die under any mode of treatment, for the fluid parts of the blood are drained off, and organic lesions take place in the brain and nervous system, which render a fever indispensable, and too often fatal.

In the course of our observations and enquiries, we have found that cold drink given almost ad libitum, and small doses of calomel given at very short intervals, have been the most effectual treatment in arresting the vomiting and determining the blood to the surface. This is no new practice, either in this or in other countries. Aræteus and many of the ancients have recommended cold drink—and at Vienna, many months ago, the practice was carried to a considerable extent, and, it is said, with much success.—*See Dr. Gilkrest's Letter in the Times.*

Before concluding these hasty notices we may remark, that Dr. Mackintosh of Edinburgh, appears to have carried on his pathological investigations in the cholera hospital there with unprecedented zeal and talent. We have had an opportunity of inspecting that gentleman's pathological museum, and we hope Dr. M. will favour the profession with the results of his indefatigable labours. The changes of structure observed after death are most extraordinary. The par vagum, in particular, has been found to present remarkable lesions, its neurilema being injected, and its substance bulged out into ganglia. The brain, the spinal marrow, the heart, the arteries, the internal coats of the intestines, have all presented phenomena of the most marked and peculiar character, which are multiplied and illustrated by the most beautiful preparations in Dr. Mackintosh's museum. We will not attempt to anticipate the well-earned fruits of that gentleman's labours, as we have no doubt he will soon make them available to the world.

LI.

MR. SCHLOSS'S ANATOMICAL MODELS.

WE have, on former occasions, spoken highly of the wax models of healthy and of morbid structures imported by Mr. Schloss, the German bookseller in St. Martin's Lane. We are glad to perceive that Mr. S. meets with some encouragement, and we should feel pleased if he met with more. Such models are unavoidably too expensive for private individuals to purchase, but they certainly should form an integral portion of the cabinets of medical schools and of medical institutions. We have no hesitation in saying that they are indispensably requisite for both. Mr. Schloss has induced the Lords of the Treasury to remit the duty on such anatomical models as are imported for public establishments, and they may, consequently, be now obtained at a reduction of 25 per cent, an important consideration. We have just inspected some models recently arrived; they are as follows.

1. Fœminæ Hottentottæ partes obscenæ, cum membranaceo illo rimæ tegumento longè famoso. In museo Regis Kratislaviensi servantur et ab artifice diligentissimè cerâ expressæ sunt. Hujus speciminis descriptionem invenies in Wmi. Otto libro.

2. Ligamenta glottidis.

3. Nervi superficiales ac arteriæ faciei et cervicis.

Mr. Schloss also shortly expects models of fungus hæmatodes of the liver and testis, and of osteo-sarcoma of the lower jaw.

With respect to the models which we have seen, we can only say that they are beautifully and accurately executed; that of the nerves of the face is almost above praise. Those who have had any dealings with Mr. Schloss must feel that his politeness and attention furnish an additional claim on their consideration, and we must say that we think this enterprising foreigner worthy of British patronage.

LII.

DR. ARNOTT'S HYDROSTATIC BED.

WE had seen this bed in use in St. George's Hospital, and were curious to find a description of it, when we lighted on one in the Lancet, for Sept. 15th of the present year. The account is said to be abridged from the 5th edition of Dr. Arnott's Elements of Physics, now in the press. We hasten to present it abridged, or rather curtailed, still further to our readers. We need not inform them how difficult it is, in many cases of long illness, to prevent the formation of sloughs on the hips or nates, in consequence of the pressure to which they are subjected, nor that, when such sloughs are formed, they too frequently contribute to the patient's destruction. In such a case, where Earle's bed and other means had failed in preventing, and, when established, in checking such sores, Dr. Arnott conceived the ingenious idea of applying water to the purposes of a bed.

"Under these circumstances, the idea of the hydrostatic bed occurred to me. Even the pressure of an air pillow had killed her flesh, and it was evident that persons in such a condition could not be saved unless they could be supported without sensible inequality of pressure. I then reflected, that the support of water to a floating body is so uniformly diffused, that every thousandth of an inch of the inferior surface has, as it were, its own separate liquid pillar, and no one part bears the load of its neighbour, and that the patient might be laid upon the surface of a bath, over which a large sheet of the waterproof India-rubber cloth was previously thrown, she being rendered sufficiently buoyant by a soft mattress placed beneath her. Such a bed was immediately made. A long trough, a foot deep, was lined with metal, to make it water-tight; it was about half-filled with water, and over it was thrown a sheet of the India-rubber cloth. Of this sheet the edges (touched with varnish, to prevent the water creeping round by capillary attraction) were afterwards secured in a water-tight manner all round to the top of the trough, the only entrance left being through an opening at one corner, which could be perfectly closed. Upon this dry sheet a suitable mattress was laid, constituting a bed ready to receive its pillow and bed-clothes, and not distinguishable from a common bed but by its surpassing softness. The patient was laid upon it; she was instantly relieved; sweet sleep came to her; she awoke refreshed; she passed the next night much better than usual; and on the following day all the sores had assumed a healthy appearance; the healing from that time went on rapidly, and no new sloughs were formed.

The down pillows were needed no more.

In choosing the mattress, if unusual positions are required, by having different thicknesses in different parts, or by placing a bulk of folded blanket or of pillow over or under the mattress in certain situations, any desired position of the body may be easily obtained. If the water be about six inches deep, which in general will suffice, the person standing upon any part of the bed, or sitting with the knees raised, will cause the part of the mattress on which he rests, gently to touch the bottom. On lying down, he as completely floats as if the Atlantic were under him.

This bed is a warm bed, owing to water being nearly an absolute non-conductor of heat from above downwards, and owing to its allowing no passage of cold air from below. From this last-mentioned fact, however, less of the perspiration, sensible and insensible, will be carried off by the air than in a common bed, and unless the patient can rise or be lifted daily, to allow the bed to be aired like a common bed, there will be a necessity for using some such means as the following, to prevent the condensation of perspiration on the water sheet below—an oiled silk laid over the mattress, or a blanket, to be occasionally changed, laid under it, or a set of flexible tubes of spiral wire laid under it, with their ends open to the atmosphere, to ensure a constant ventilation of the mattress; or, similarly placed, and producing the same effect, a layer of cork cut into square pieces, with spaces left between them, to serve as conduits of air. This bed in itself is as dry as a bed can be, for the India-rubber cloth (of which bottles can be made) is quite impermeable to water, and the maker is now preparing cloth expressly for this purpose. Unlike any other bed, it allows the patient to change his position almost like a person swimming, and so affording the kind of relief which, in constrained positions, is obtained by occasional stretching. It exceedingly facilitates turning for the purpose of dressing wounds, for by raising one side of the mattress, or depressing the other, or merely by the patient's extending a limb to one side, he is gently rolled over, nearly as if he were simply suspended in water; and it is possible even to dress wounds, apply poultices, or place vessels under any part of the body, without moving the body at all; for there are some inches of yielding water under the body, and the elastic mattress may at any part be pushed down, leaving a vacant space there, without the support being lessened for the other parts. It may be made so cheaply, that even in hospitals, where economy must prevail, it may at once be adopted for many of the bed-ridden. The bed has been introduced into St. Bartholomew's and St. George's Hospitals, and elsewhere. With it sloughing need never occur again, and by alleviating distress through the earlier stages of disease, it may prevent many cases from even reaching a degree of danger. It is peculiarly applicable to cases of fractured bones, and other surgical injuries; to palsies, diseases of the hip-joint, and spine; and universally where persons are obliged to pass much time in bed. Also in all cases of curvature of the spine, existing or threatened. If used without the mattress, it becomes a warm or a cold bath, not allowing the body however to be touched by the water; and in India it might be made a cool bed for persons sick or sound, during the heats which there prevent sleep and endanger health."

Dr. Arnott has very properly commissioned no person in particular to manufacture it.

LIII.

The Anatomy Act.

On the 1st of August the Act for Regulating Schools of Anatomy became the law of the land. The passing of such an Act is a sort of era in medicine, and one illustration, among many, of the growing intelligence of legislators. It is now apparent that what is just and reasonable in principle, will, if properly and patiently urged, receive the attention and ultimately the sanction of those who legislate in England. On these accounts we hail the Act as a boon, no, not a boon, but a tribute to the majesty of truth, a concession to the interests of science, a triumph to intellect and civilization. We look not to the wording of the Act, we look not to its details, but we look to its general tenor, and we find in those who framed it a sincere desire and an anxious attempt to promote the true interests of the public, and the advancement of the medical profession. This is due to Mr. Warburton, and we freely offer our tribute of praise to the gentleman by whose exertions the Bill was introduced, and to the Government by whose liberality it was carried.

But in making this acknowledgment, we do not surrender our private judgment, nor lose the right of expressing our individual opinions. We do think the Bill defective, and although we cannot pretend to foretell in what manner it will work, we confess that we entertain misgivings as to the result. We are willing to admit that great difficulties have presented themselves to the supporters of the measure, and it may be true, though we do not ourselves believe it, that a more efficient one could not have been carried. Before we make any farther remarks, we insert the whole of the Act, as contained in the weekly medical journals, together with the circulars issued by Dr. Somerville, who has been appointed to the office of inspector.

AN ACT FOR REGULATING SCHOOLS OF ANATOMY.

[1*st August*, 1832.]

Whereas a knowledge of the causes and nature of sundry diseases which affect the body, and of the best methods of treating and curing such diseases, and of healing and repairing divers wounds and injuries to which the human frame is liable, cannot be acquired without the aid of anatomical examination: And whereas the legal supply of human bodies for such anatomical examination is insufficient fully to provide the means of such knowledge: And whereas, in order further to supply human bodies for such purposes, divers great and grievous crimes have been committed, and lately murder, for the single object of selling for such purposes the bodies of the persons so murdered: And whereas therefore it is highly expedient to give protection, under certain regulations, to the study and practice of anatomy, and to prevent, as far as may be, such great and grievous crimes and murder as aforesaid; be it therefore enacted, by the King's most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, That it shall be lawful for his Majesty's Principal Secretary of State for the time being for the Home Department in that part of the United Kingdom called Great Britain, and for the Chief Secretary for Ireland in that part of the United Kingdom called Ireland, immediately on the passing of this Act, or so soon thereafter as may be required, to grant a licence to practise anatomy to any fellow or member of any college of physicians or surgeons, or to any graduate or licentiate in medicine, or to any person lawfully qualified to practice medicine in any part of the United Kingdom, or to any professor or teacher of anatomy, medicine, or surgery, or to any student attending any school of anatomy, on application from such party for such purposes, countersigned by two of his Majesty's justices of the peace acting for the county, city, borough, or place wherein such party resides, certifying that, to their knowledge or belief, such party so applying is about to carry on the practice of anatomy.

II. And be it enacted, That it shall be lawful for his Majesty's said Principal Secretary of State, or Chief Secretary, as the case may be, immediately on the passing of this Act, or as soon thereafter as may be necessary, to appoint respectively not fewer than three persons to be inspectors of places where anatomy is carried on, and at any time after such first appointment to appoint, if they shall see fit, one or more person or persons to be an inspector or inspectors as aforesaid; and every such inspector shall continue in office for one year, or until he be removed by the said Secretary of State or Chief Secretary, as the case may be, or until some other person shall be appointed in his place; and as often as any inspector appointed as aforesaid shall die, or shall be removed from his said office, or shall refuse or become unable to act, it shall be lawful for the said Secretary of State or Chief Secretary, as the case may be, to appoint another person to be inspector in his room.

III. And be it enacted, That it shall be lawful for the said Secretary of State or Chief Secretary, as the case may be, to direct what district of town or country, or of both, and what places where anatomy is carried on, situate within such district, every such inspector shall be appointed to superintend, and in what manner every such inspector shall transact the duties of his office.

IV. And be it enacted, That every inspector to be appointed by virtue of this Act shall make a quarterly return to the said Secretary of State or Chief Secretary, as the case may be, of every deceased person's body that during the preceding quarter has been removed for anatomical examination to every separate place in his district where anatomy is carried on, distinguishing the sex, and as far as is known at the time, the name and age of each person whose body was so removed as aforesaid.

V. And be it enacted, That it shall be lawful for every such inspector to visit and inspect, at any time, any place within his district, notice of which place has been given, as is herein-after directed, that it is intended there to practise anatomy.

VI. And be it enacted, That it shall be lawful for his Majesty to grant to every such inspector such an annual salary, not exceeding one hundred pounds, for his trouble, and to allow such a sum of money for the expenses of his office as may appear reasonable; such salaries and allowances to be charged on the Consolidated Fund of the United Kingdom, and to be payable quarterly; and that an annual return of all such salaries and allowances shall be made to Parliament.

VII. And be it enacted, That it shall be lawful for any executor or other party having lawful possession of the body of any deceased person, and not being an undertaker or other party intrusted with the body for the purpose only of interment, to permit the body of such deceased person to undergo anatomical examination, unless, to the knowledge of such executor or other party, such person shall have expressed his desire, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, that his body after death might not undergo such examination, or unless the surviving husband or wife, or any known relative of the deceased person, shall require the body to be interred without such examination.

VIII. And be it enacted, That if any person, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, shall direct that his body after death be examined anatomically, or shall nominate any party by this Act authorized to examine bodies anatomically to make such examination, and if, before the burial of the body of such person, such direction or nomination shall be made known to the party having lawful possession of the dead body, then such last-mentioned party shall direct such examination to be made, and, in case of any such nomination as aforesaid, shall request and permit any party so authorized and nominated as aforesaid to make such examination, unless the deceased person's surviving husband or wife, or nearest known relative, or any one or more of such person's nearest known relatives, being of kin in the same degree, shall require the body to be interred without such examination.

IX. Provided always, and be it enacted, That in no case shall the body of any person be removed for anatomical examination from any place where such person may have died, until after forty-eight hours from the time of such person's decease, or until after twenty-four hours notice, to be reckoned from the time of such decease, to the inspector of the district, of the intended removal of the body, or, if no such inspector have been appointed, to some physician, surgeon, or apothecary residing at or near the place of death, nor unless a certificate stating in what manner such person came by his death shall previously to the removal of the body have been signed by the physician, surgeon, or apothecary who attended such person during the illness whereof he died, or if no such medical man attended such person during such illness, then by some physician, surgeon, or apothecary who shall be called in after the death of such person to view his body, and who shall state the manner or cause of death according to the best of his knowledge and belief, but who shall not be concerned in examining the body after removal; and that in case of such removal, such certificate shall be delivered, together with the body, to the party receiving the same for anatomical examination.

X. And be it enacted, That it shall be lawful for any Member or Fellow of any College of Physicians or Surgeons, or any graduate or licentiate in medicine, or any person lawfully qualified to practise medicine in any part of the united kingdom, or any professor, teacher, or student of anatomy, medicine, or surgery, having a licence from his Majesty principal secretary of state or chief secretary as aforesaid, to receive or possess for anatomical examination, or to examine anatomically, the body of any person deceased, if permitted or directed so to do by a party who had at the time of giving such permission or direction lawful possession of the body, and who had power, in pursuance of the provisions of this Act, to permit or cause the body to be so examined, and provided such certificate as aforesaid were delivered by such party together with the body.

XI. And be it enacted, That every party so receiving a body for anatomical examination after removal shall demand and receive, together with the body, a certificate as aforesaid, and shall, within twenty-four hours next after such removal, transmit to the inspector of the district such certificate, and also a return stating at what day and hour and from whom the body was received, the date and place of death, the sex, and (as far as is known at the time) the christian and surname, age, and last place of abode of such person, or, if no such inspector have been appointed, to some physician, surgeon, or apothecary residing at or near the place to which the body is removed, and shall enter or cause to be entered the aforesaid particulars relating thereto, and a copy of the certificate he received therewith, in a book to be kept by him for that purpose, and shall produce such book whenever required so to do by any inspector so appointed as aforesaid.

XII. And be it enacted, That it shall not be lawful for any party to carry on or teach anatomy at any place, or at any place to receive or possess for anatomical examination, or examine anatomically, any deceased person's body after removal of the same, unless such party, or the owner or occupier of such place, or some party by this Act authorized to examine bodies anatomically, shall, at least one week before the first receipt or possession of a body for such purpose at such place, have given notice to the said secretary of state or chief secretary, as the case may be, of the place where it is intented to practise anatomy.

XIII. Provided always, and be it enacted, That every such body so removed as aforesaid for the purpose of examination shall, before such removal, be placed in a decent coffin or shell, and be removed therein; and that the party removing the same, or causing the same to be removed as aforesaid, shall make provision that such body, after undergoing anatomical examination, be decently interred in consecrated ground, or in some public burial ground in use for persons of that religious persuasion to which the person whose body was so removed belonged; and that a certificate of the interment of such body shall be transmitted to the inspector of the district within six weeks after the day on which such body was received as aforesaid.

XIV. And be it enacted, That no member or fellow of any college of physicians or surgeons, or any graduate or licentiate in medicine, nor any person lawfully qualified to practise medicine in any part of the united kingdom, nor any professor, teacher, or student of anatomy, medicine, or surgery, having a licence from his Majesty's principal secretary of state or chief secretary as aforesaid, shall be liable to any prosecution, penalty, forfeiture, or punishment for receiving or having in his possession for anatomical examination, or for examining anatomically, any dead human body, according to the provisions of this Act.

XV. And be it enacted, That nothing in this Act contained shall be construed to extend to or to prohibit any post-mortem examination of any human body required or directed to be made by any competent legal authority.

XVI. And whereas an Act was passed in the ninth year of the reign of his late Majesty, for consolidating and amending the statutes in England relative to offences against the person, by which latter Act it is enacted, that the body of every person convicted of murder shall, after execution, either be dissected or hung in chains, as to the court which tried the offender shall seem meet; and that the sentence to be pronounced by the court shall express that the body of the offender shall be dissected or hung in chains, whichsoever of the two the court shall order; be it enacted, That so much of the said last-recited Act as authorizes the court, if it shall see fit, to direct that the body of a person convicted of murder shall, after execution, be dissected, be and the same is hereby repealed; and that in every case of conviction of any prisoner for murder, the court before which such prisoner shall have been tried shall direct such prisoner either to be hung in chains, or to be buried within the precincts of the prison in which such prisoner shall have been confined after conviction, as to such court shall seem meet; and that the sentence to be pronounced by the court shall express that the body of such prisoner shall be hung in chains, or buried within the precincts of the prison, whichever of the two the court shall express that the body of such prisoner shall be hung in chains, or buried within the precincts of the prison, whichever of the two the court shall order.

XVII And be it enacted, That if any action or suit shall be commenced or brought against any person for any thing done in pursuance of this Act, the same shall be commenced within six calendar months next after the cause of action accrued; and the defendant in every action or suit may, at his election, plead the matter especially, or the general issue not guilty, and give this Act and the special matter in evidence at any trial to be had thereupon.

XVIII. And be it enacted, That any person offending against the provisions of this Act in England or Ireland shall be deemed and taken to be guilty of a misdemeanor, and, being duly convicted thereof, shall be punished by imprisonment for a term not exceeding three months, or by a fine not exceeding fifty pounds, at the discretion of the court before which he shall be tried; and any person offending against the provisions of this Act in Scotland shall, upon being duly convicted of such offence, be punished by imprisonment for a term not exceeding three months, or by a fine not exceeding fifty pounds, at the discretion of the court before which he shall be tried.

XIX. And in order to remove doubts as to the meaning of certain words in this Act, be it enacted, That the words "person and party" shall be respectively deemed to include any number of persons, or any society, whether by charter or otherwise; and that the meaning of the aforesaid words shall not be restricted although the same may be subsequently referred to in the singular number and masculine gender only.

XX. And be it enacted, That this Act shall commence and take effect from and after the first day of August in the present year.

XXI. And be it enacted, That this Act may be altered or amended during the present session of Parliament.

Directions of the London Inspectors of Anatomy, under the New Anatomical Bill.

Sir,—I am desirous, on being appointed inspector pursuant to the Act for regulating the schools of anatomy, to solicit your co-operation in carrying into execution the enactments of the legislature.

In order to facilitate this object, and to secure uniformity and regularity of proceeding, I beg leave to submit to you a general form of return, as required by the statute, together with an abstract of the duties which appear to me to be imposed by it upon teachers of anatomy. It is unnecessary for me to point out how important it is, for the satisfaction of the public mind, that the natural feelings of human nature should be consulted by a strict attention to the thirteenth section of the Act, which provides for the decent interment of bodies after they have undergone anatomical examination.

I have only to add that I shall be anxious to receive such advice and information as your knowledge and experience may suggest, and to assure you that any such communications, as well as the returns, shall be considered by me strictly secret and confidential, and shall only be reported to the public authorities as directed and required by the Act of Parliament.

I am, Sir,
Your obedient servant,
Jas. C. Somerville, M.D.

Office of Inspector of Anatomy,
5, Saville Row.
30th Aug. 1832.

Form of Application.

The party applying for a licence to practise anatomy must make a written application to the secretary of state, signed by him with his christian and surname at length, in which application he must state, he applies for a licence to practise anatomy, in pursuance of the Act passed for regulating schools of anatomy. He must state also the place of his residence, and the place where he is about to carry on the practice of anatomy, and must further state that he is, according as the case may be, [a fellow or a member of a College of Physicians or Surgeons], *or* [a graduate or licentiate in medicine], *or* [a person lawfully qualified to practise medicine in England, Scotland, or Ireland], *or* [a professor or teacher of anatomy, medicine, or surgery], *or* [a student attending a school of anatomy.]

This application is to be countersigned by two justices of the peace acting for the county, city, or borough wherein the party applying resides, and so describing themseves, certifying the place of residence of the party, and also the place where they believe him to be about to carry on the practice of anatomy.

Duties of Teachers of Anatomy, according to the Act for regulating Schools of Anatomy.

To obtain a licence according to the provisions of the Act 2d and 3d Will. IV. c. 75.

Upon receiving a body for anatomical examination, to demand and receive with the body a certificate from the physician, surgeon, or apothecary who attended the person during the illness of which he died, or from some surgeon, physician, or apothecary who shall have been called in after the death of such person to view the body, stating the manner or cause of the death, and to transmit, within twenty-four hours next after the removal of the body, such certificate to the inspector of the district; and also a return stating at what day and hour and for whom the body was received, the date and place of death, the sex, and, as far as is known at the time, the christian and surname, age, and last place of abode of such person; or if no such inspector shall have been appointed, to some physician, surgeon, or apothecary residing at or near the place to which the body is removed; and to enter or cause to be entered the aforesaid particulars, and a copy of the certificate, in a book to be kept by him for that purpose, and to produce such book whenever required by the inspector.

To give notice to the secretary of state of every place where it is intended to practise anatomy at least one week before the first receipt or possession of a dead body for such purpose at such place.

To take care that every body removed for examination shall be removed in a decent and fitting manner, and to make provision that such body, after undergoing anatomical examination, be decently interred, according to the thirteenth clause of the said Act; and that a certificate of the interment of such body be transmitted to the inspector of the district within six weeks after the day of the reception of such body.

Duties of the Inspector.

He shall keep an account of all the schools of anatomy licensed by the secretary of state within the district for which he shall be appointed, with the names and residences of the teachers.

He shall make a quarterly return to the secretary of state of the body of every deceased person that during the preceding quarter has been removed for anatomical examination to every separate place in his district where anatomy is carried on; distinguishing the sex, and, as far as is known at the time, the name and age of each person whose body has been so removed as aforesaid.

He shall visit and inspect from time to time every place within his district, of which place notice has been given that it is intended there to practise anatomy; he shall take care that the provisions of the Act of Parliament are enforced, and shall report to the secretary of state any irregularities or offences against the Act which he shall observe.

He shall enter in a register kept for the purpose the returns from each school separately, and shall keep copies of all his returns and reports to the secretary of state, and shall enter all the correspondence relating to the duties of his office in a letter-book.—

CONFIDENTIAL RETURN *from the School of Anatomy at* ______________

As required by the 2nd and 3rd Will. IV. c. 75.

The Christian Name and the Surname of the Deceased.	Age and Sex.	Last Place of Abode of deceased Person.	Date and Place of Death.	Time of Removal.	Day and Hour at which the Body was received, and from whom received.	Observations.

(Signed)______________ Teacher."

It will be observed that this Act says nothing respecting the supply of dead bodies, and the only ostensible source is that indicated in section VIII., viz. the bequest by any one of his or her own body, provided none of the "nearest known relatives" object. This source we may readily imagine to be not quite sufficient for the wants of the profession, yet this is the only, or at least the chief, source clearly pointed out. So far, then, the Act might seem, to ordinary observers, to resemble the play of Hamlet, without the part of the Prince of Denmark. It would, indeed, appear to be an Act for Regulating Schools of Anatomy, but not for Supplying them.

But when we look more closely, we shall see that dead bodies are implied to be a property—a legal property. But with whom? With relatives, of course. Others have also a legal right to dispose of the bodies of the deceased, at least such a right is dimly hinted at in the 7th section, which we reprint.

"VII. And be it enacted, That it shall be lawful for any executor or other party having lawful possession of the body of any deceased person, and not being an undertaker or other party entrusted with the body for the purpose only of interment, to permit the body of such deceased person to undergo anatomical examination, unless, to the knowledge of such executor or other party, such person shall have expressed his desire, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, that his body after death might not undergo such examination, or unless the surviving husband or wife, or any known relative of the deceased person, shall require the body to be interred without such examination."

Thus the parties having the disposal of dead bodies are declared to be "any executors or other party having lawful possession," "not being an undertaker, or other party entrusted with the body for the purpose only of interment." So an executor may dispose of the body, provided there be no relatives to object, and provided also the deceased has expressed no objection before death. To get a body, in short, from an executor there must be no repugnant near relations, no previous objection on the part of the patient, and finally the executor himself must be willing. We fancy we need not expect much from executors. The question then comes to be this, can the words "other party" apply to overseers, and will they be induced to consider them as applicable. It is quite apparent that they may or they may not, that in fact they have the option of even construing the Act as totally inapplicable to them. Here then we are left at the mercy of the individual overseer, and all that we obtain from him must be from motives of interest, or it must be an obligation. Those who are acquainted with overseers will best know what they may expect from their courtesy; for our own parts we are little versed in parish arcana. Self-interest may work in two ways. First, the parish may escape the pauper's burial; and secondly, they may even drive a bargain for his corpse. The latter we presume will not be attempted. The expense then taken from the parish must naturally fall on him who obtains the body, that is upon the pupil. The London Medical Journal asserts that funeral expenses and burial fees will amount, on the lowest calculation, to from three to five pounds in every instance, and that if this be added to the sum which must be paid to relatives the price will be considerably increased.

So much for the question of expense, but the great point after all is the adequacy of supply. In Massachusetts a simple method has been adopted—the unclaimed poor have been dedicated to the purposes of dissection. The supply is defined, liable to no misconception, and we believe that it is adequate. Here there is no obvious supply at all, but a dark and a quiet league is to be struck between the anatomist and the parish. In point of efficiency no one, we believe, admits that such a provision, or rather want of provision, is comparable for a moment to the plain, consistent, and straight forward declaration that those who die friendless in public institutions may be dissected. It is right, however, to state that the advocates of the Act declare that it will work well, that the supply will be sufficient, and the expenses moderate. A short trial will determine the justice or otherwise of this expectation.

But supposing all this to be true, there are other, and very important considerations behind. The aim of a legislator on anatomy, we conceive to be, to confer the greatest quantum of benefit on science, with the least amount of injury to private feelings and public morals. This is the problem to be solved. Now which is most likely to foster prejudice, and engender vice—the plain and open declaration that the bodies of the friendless will be dissected—or a dark, cogging, intriguing covenant between the surgeon and the parish, or the surgeon and the relatives of the dead? For our own parts we do not hesitate for one instant to prefer the former, and to express our unqualified disapprobation of the latter. By the one piece of legislation all is clear and undisguised, and the pauper to be dissected knows that this is one of the many evils which his vices or his misfortunes have brought upon him. By the other law, our own law, a door is opened to intrigue, sordid feelings, and even to a base traffic in dead bodies, on the part of mercenary relatives. A parish may determine, if it please, to sell its dead paupers, or the father may turn a penny by the corpse of his child, the wife by the body of her husband. Thus the trade in anatomy will be kept alive, and the private companies of resurrectionists may be superseded by huge parish monopolies, or licensed retailing relations. It will be said that these are idle fears. They may be so, but we are sure that the principle of the Act admits of these mal-practices, and is far more calculated to destroy morality than to encourage it. The other law may be stern, may in some degree be cruel, may be looked on as offering the pauper to the Moloch of science, but at least it is inflexible, it says to him, "you are vicious or unfortunate and poor, and we anatomize you when dead for the benefit of your species; but be assured that we do not make you an instrument of private or of public barter, we do not bring your corpse to a secret and unholy market."

Our space is too limited to suffer us to proceed further in these observations but we have thought it right to record our deep-seated objections against the constitution of the Act, now that it is about to be brought into operation. None will feel greater pleasure than we shall, if those objections should prove to be unfounded, but we feel a conviction too deep to be easily shaken, that less prejudice would ultimately have been excited, and that a more efficient, as well as a more honourable supply of dead bodies would have been obtained, by declaring manfully and honestly that the unclaimed poor would be dissected.*

LIV.

UNDERCLIFFE—ISLE OF WIGHT.

We beg to solicit the attention of our brethren to the following points. Mr. Whiskard, a surgeon, who was afflicted with pulmonary consumption, resided for some time at Undercliffe, in the Isle of Wight, and was so much benefitted and pleased with the situation, that he purchased a house there, and received invalid boarders. There is no doubt that he would have succeeded as far as pecuniary matters were concerned; but, unfortunately, his complaint had too far advanced, and he has just departed this world, leaving a widow and four orphans totally unprovided for, unless the patronage of the profession enables her to carry on the establishment which had been completed by her husband. We can safely recommend the situation for invalids requiring a mild sea air, sheltered from the northern winds, and the accommodations, we believe, in Mrs. Whiskard's house, will be found both comfortable and reasonable—the terms being two guineas a week for board and lodging. We hope and trust that the humane among our brethren, who may happen to have an opportunity of recommending patients to this delightful and salubrious retreat will not forget the widow and orphans of Mr. Whiskard.

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* It appears that one of those taxes upon knowledge in which this country is so rife, has been mixed up with the Act in its operation. The clerks of the Home-Office, have been the first to make something by the dead, and £2. 2s. 6d. is charged for the license. Lord Melbourne having been written to, replied, very justly, that "the fee is in accordance with the *invariable* usage of the office," and his Lordship might have added, of every other office in this country. It must indeed be a legislative caput mortuum, which can afford in its passage through executive presses, no extract in the shape of fees. The living and the dead are equally rife in precious ore to the searching fingers of these official anatomists. It is well remarked by our contemporary, the London Medical and Surgical Journal, that the medical profession is the only one expected to give certificates for nothing. Those who are directed by the Act to sign the certificate of the patient's decease, &c. would not find it the invariable usage of the Home-Office to remunerate them.

LV.

PROVINCIAL MEDICAL AND SURGICAL ASSOCIATION.

On the 19th July, upwards of fifty medical men met in the board-room of the Worcester Infirmary, to found an association bearing the above title. Its object is to promote cordial and social feeling among its members, and, by the publication of Transactions, to benefit the community and advance science. The Association owes its origin to the talent and energy of Dr. Hastings, a man who does as much honour to his profession as it can confer on him. We need scarcely say that we approve of such an association most warmly, we need scarcely add, that we would wish to see the social principle it developes diffused yet more widely amongst the medical practitioners of these Isles. Such associations are productive of benefit in several ways—first, by promoting harmony in a profession which is said to want it—secondly, by encouraging the publication of public and private experience—thirdly, by contributing to raise the professional and intellectual character of provincial surgeons and physicians. In a few years, the libeller or satirist may search in vain for that "low-born, cell-bred, selfish, servile crew," that private practitioners have, in former times, been said to be. With increased advantages of education, and such associations as these, the character of the whole profession is elevated.

LVI.

Obituary.

DR. J. ALLSOP.

It is with unfeigned sorrow we record the death of a young, but a most zealous and talented physician of Birmingham, Dr. Josias Allsop, who fell a victim to the fatal epidemic, on the 6th of August last, after a short illness. He had been at Tipton (a village about 9 miles from Birmingham) where cholera was raging violently, and attended the poor there, day and night, for a fortnight, scarcely allowing himself any time for repose. He returned home on Saturday night, the 4th of August, greatly jaded and fatigued, observing to his wife that he had not had more than three hours sleep during the preceding week. On Sunday morning he seemed drowsy, but he dressed and went out to see some patients—returned to dinner—and appeared to have regained his strength and spirits. At 9 o'clock in the evening he ate a hearty supper, and retired to rest about 10 o'clock, apparently in health. At four o'clock in the morning he was called out of bed to see some patients, and returned at six o'clock. His wife, who had been recently confined of her third child, was soon informed by the nurse that her husband was very ill, and she instantly arose and went to him. The unfortunate lady was horrified at beholding her husband sitting up in bed, more like a corpse than a living being, and taking down notes of his own case! He expressed himself glad at having an attack of the epidemic, and said he would now be able to understand and to treat the disease better than before! But he soon became extremely weak, and gave up his pen to his wife, while he dictated to her the symptoms which he felt. The violence of the cramps soon compelled him to give over this task also, and after severe sufferings for some hours, he fell into a state of insensibility, from which he never after recovered! Thus perished, at the early age of 27 years, a most accomplished and intelligent physician, who, we have no doubt, fell a victim to his zeal in the investigation of a mysterious epidemic. Our readers are aware that Dr. Allsop wrote several papers on cholera in our contemporary the Medical Gazette—and we may here state that he was the author of the article "*Progress of Cholera in England,*" from page 645 to 674 in our last volume, bearing the signature A.—to which we can confidently refer for proof of the learning, talents, and judgment of its author.

Deeply do we regret to add that Dr. Allsop has left an amiable widow and three orphans to deplore the premature death of an affectionate parent, who, had life been spared, would have honourably distinguished himself in his profession, and provided amply for his family.

BIBLIOGRAPHICAL RECORD;

OR,

Works received for Review since the last Quarter.

1. The Sources of Health and Disease in Communities; or Elementary Views of Hygiene: illustrating its importance to Legislators, Heads of Families, &c. By **Henry Belinage**, Esq. Small 8vo, pp. 262. Truttel and Wurtz, July, 1832.

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2. Two Lectures on the Primary and Secondary Treatment of Burns. By **Henry Earle**, F.R.S. Surgeon Extraordinary to the King, &c. Octavo, pp. 59. July, 1832.

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3. Counteraction, viewed as a Means of Cure; with Remarks on the Uses of the Issue. By **John Epps**, M.D. Lecturer on Materia Medica, &c. Octavo, pp. 69. July, 1832. ☞ *See Periscope.*

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4. Practical Essays on Medical Education in the United States. By **Daniel Drake**, M.D. Octavo, pp. 104. 1832.

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5. A Conspectus of the Butterflies and Moths found in Britain; with their English and systematic Names, Times of Appearance, Sizes, Colours, &c. By **James Rennie**, M.A. Professor of Zoology, King's College, &c. Duodecimo, pp. 287. July, 1832. Price 7s. 6d. boards.

6. Scientific Alphabet of Insects, for the Use of Beginners. By **James Rennie**, M.A. Professor of Zoology, King's College, London. Duodecimo, pp. 108. July, 1832.

The two little works above recorded, comprise, within small dimensions, a vast mass of information. They will be exceedingly useful in acquiring an insight of that very curious and beautiful study, Insectology. *We strongly recommend these pocket volumes.*

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7. Transactions of the Medical and Physical Society of Calcutta. Volume the Fifth. Octavo, pp. 449. Calcutta, 1831.

☞ *Noticed in various parts of this Journal.*

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8. Medical Reports: containing Observations on Cholera, Dysentery, the Effects of Sulphate of Quinine as a Remedy of Fever, and on Inflammation of Veins, with Cases of these Diseases, and Notices relative to the Treatment of Syphilis without Mercury, &c. Selected by the Medical Board (Madras) from the Records of their Office, and published under the sanction of Government. 8vo, pp. 363. Madras, 1831. (Presented, with the sanction of Government, to Dr. James Johnson, of London, by the Madras Medical Board.)

☞ *We have given some account of this important volume in this number.*

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9. Practical Observations on Midwifery; with a Selection of Cases. Part II. By **John Ramsbotham**, M.D. late Lecturer on Midwifery at the London Hospital, &c. Octavo, pp. 507. Highley, London. July, 1832.

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10. Effects of Arts, Trades, and Professions, and of Civic States and Habits of Living, on Health and Longevity: with Suggestions for the removal of many of the Agents which produce disease, and shorten the Duration of Life. By **C. Turner Thackrah**, Esq. Second Edit. greatly enlarged. July, 1832.

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11. Moyens à opposer au Cholera Pestilentiel; fautes qu'on doit eviter. Par **J. N. Guilbert**, ancien Professeur de la Faculté de Medicine de Paris. July, 1832.

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12. Notes and Observations upon the Contagion of Typhus Fever, and Contagion generally. By **William Fergusson**, M.D. F.R.S.E. &c. (Corrected from the Edinb. Med. and Surg. Journal.)

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13. Clinical Reports of the Surgical Practice of the Glasgow Royal Infirmary. By **John Macfarlane**, M.D. Octavo, pp. 314. Glasgow, July, 1832.

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14. Statement of Facts with Observations. By Dr. **Craigie**, of Leith. 8vo, sewed. July, 1832.

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15. Observations on Spasmodic Cholera, its Origin, Nature, and Treatment; with Remarks on Epidemic Diseases generally. By **Henry M'Cormac**, M.D. Belfast, July, 1832. 8vo, sewed, pp. 20.

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16. Tabula Anatomiam Comparativam Illustrante, quas exhibuit **Carolus Gustavus Carus**, M.D. &c. Textum in Latinum Sermonen Vertit **F.A.L. Threne-**

MANN, M D. Pars III. Continens Novem Tabulas, æri incisas, variarum Animalium Classium Historiam Evolutionam Illustrantes. Folio. Lipsiæ, 1831.

☞ *Noticed in the Journal.*

17. A plain and brief Sketch of Cholera, with a simple and econominal Mode for its Treatment, submitted with confidence from repeated success in its Application. By WILLIAM HENRY WILLIAMS, M.D. F.R.S. &c. Second Edition, revised and enlarged. Octavo, stitched, pp. 29. Ipswich, 1832.

☞ *Noticed in Periscope.*

18. A Compendium of Human and Comparative Pathological Anatomy. By ADOLPHO WILHELM OTTO, M.D. Royal Counsellor in the Medical College of Silesia, &c. Translated from the German, with additional Notes and References. By JOHN F. SOUTH, Lecturer on Anatomy at St. Thomas's Hospital. 8vo, pp. 456. London, 1831. ☞ *Noticed in this No.*

19. The Anatomy and Physiology of the Organ of Hearing; with Remarks on Congenital Deafness, the Diseases of the Ear, some Imperfection of the Organ of Speech, and the proper Treatment of these several Affections. By DAVID TOD, M.R.C.S. 8vo, pp. 147. London, 1832.

20. Dr. Davis's Principles and Practice of Obstetric Medicine. Part X.

☞ *To be noticed.*

21. The Cyclopædia of Practical Medicine for June, July, August.

☞ *To be noticed.*

22. Observations on Spasmodic Cholera, its Origin, Nature, and Treatment; with Remarks on Epidemic Diseases generally. Second Edition. 8vo, stitched, pp. 28. London, 1832.

☞ *A sensible pamphlet.*

23. A Treatise on Cholera, containing the Author's Experience of the Epidemic known by that name, as it prevailed in the City of Moscow in Autumn, 1830, and Winter, 1831. By JAMES KEIR, M.D. &c. Octavo, pp. 138. Edinburgh, 1832.

24. Experimental Inquiries in Chemical Physiology. Part I, complete in one volume, on the Blood. With an Appendix, containing Remarks on the Nature and Treatment of Cholera Asphyxia. By HORATIO PRATER. 8vo, pp. 304. Highley, London, 1832.

25. De la Nature, du Siege, et du Traitement du Cholera-Morbus. Par M. M. FOVILLE et PARCHAPPE, Docteurs en Médecine. En 8vo, pp. 64, 2 planches. Rouen, 1832.

☞ *We shall notice this pamphlet.*

26. A Letter addressed to the Central Board of Health, written with the View of establishing rational Principles for the Treatment of Cholera; and shewing the Danger of the Mode of Practice at present generally followed. By JOHN GEO. FRENCH, Surgeon to St. James's Cholera Hospital, &c. Octavo, stitched, pp. 22. London, 1832.

27. The Principles and Practice of Obstetric Medicine. By Dr. D. DAVIS, &c. Part XI.

28. Denman's Introduction to the Practice of Midwifery. Seventh Edit. With additional modern Information on the various Subjects treated of in the Work, and a Dissertation in the Transfusion of Blood in the more dangerous Varieties of Uterine Hæmorrhage. By CHAS. WALLER, M.D. &c. 8vo, pp. 525. Cox, London, 1832.

29. Surgical Anatomy of the Arteries. With Plates and Illustrations. By NATHAN R. SMITH, M.D. Professor of Surgery in the University of Maryland, and one of the Surgeons of the Baltimore Infirmary. 4to, bds, pp. 104, 18 plates. Baltimore, 1832. ☞ *To be noticed.*

30. On a New Membrane in the Eye; being the Substance of a Lecture delivered at Oxford before the British Association for the Advancement of Science. By GEO. HEMSLEY FIELDING, M.R.C.S.L. &c. 8vo, stitched, pp. 28. Hull, 1832.

☞ *To be noticed.*

31. Parts I. and II. of the Illustrations of the Surrey Zoological Gardens, drawn from Nature on Stone, with descriptive Notices. By W.H. Rearney. Lithograph Prints, 3s. 6d. each. Proofs on India, 6s.

☞ *These are extremely good lithographic plates, and must prove an acceptable work to the lovers (as who are not?) of natural history.*

We have also received from Mr. Schloss a coloured lithograph by L. Stole, a very promising artist, representing some of the parrot tribe. It is executed clearly, neatly, and cleverly.

EXTRA-LIMITES.

LETTER

FROM

DR. HACKET TO DR. JOHNSON,

RESPECTING

DR. STEVENS' PUBLICATION.

SIR,

I shall once more trouble you, in consequence of Dr. Stevens' reply to my statement, published by you; and ere I proceed to that subject, I must first express my surprise at the even *more than* insinuation he expresses of a combination entered into between yourself, some others, and me, against him—but there is a hardihood of assertion, a real "Corinthian" effrontery about this gentleman, rarely to be met with in the common walks of life; but which, when found amongst those who, by profession or situation, rank as gentlemen, calls forth, according to circumstances, either surprise or indignation, or possibly both.

It is not necessary for me to declare to you, but it becomes necessary from so foul an insinuation, to say, that you are totally and entirely unknown to me, except in your public professional character; and that no communication directly or indirectly ever passed between us until I addressed to you the paper for publication which you were good enough to give to the public. The natural disgust arising in a candid and ingenuous mind from a plain statement of facts upsetting the tenets of a most vain and presumptuous man has, it seems, been sufficient to call forth his ire and wrath against you—this you will know how to appreciate, recollecting that the abuse of some people is perhaps the greatest praise that any individual can receive. I am not personally acquainted with Dr. Stevens, nor is it *now* possible I ever shall be; nevertheless he has depicted himself in such glowing colours that I now know him perfectly well, and know too how to estimate his full value,—his candor and fairness are equally appreciated, since my statement, by the generality of practitioners throughout the West Indies, as by myself.

In looking over the reply offered to the public, I feel, I confess, a mingled sensation of pity, derision, nay, perhaps I might add, contempt for the exhibition of the unbridled arrogance and presumption displayed therein, and the want of taste and gentlemanly feeling depicted throughout the whole, from first to last; but checking all such sensations, and coming to particulars, the following seems the claim set up by Dr. Stevens on his own behalf, divested of all that embellishment or special pleading, so distinguishable throughout, and the consequent accusation contained therein against us.

First:—He insists that we, the medical officers of the garrison of Trinidad, are solely indebted to him for the success we obtained in the treatment of fever there, because we had a great mortality previous to his visit in the middle or latter end of August, 1829; which mortality, he *insists*, ceased from "the moment" of his arrival: having it seems pointed out to Mr. Greatrex the errors of the previous practice followed, recommending in lieu thereof a combination of muriate of soda and nitrate of potash to replenish the colouring and saline properties of the blood; to the former of which, in common with "the waters of the deep" it owes its preservation, but which becomes either exhausted in the course of fever, thereby causing its dissolution, and consequent death of the individual; or is, in point of fact, the only and real cause of disease or death; and which recommendation, from our own shewing, was not only complied with, but generally adopted.

Secondly:—That, even from our own shewing, we have charged him wrongfully with misrepresentation and want of candor; for, in point of fact, there is no difference between the anatomical description given by us of those who had died of tropical fever, and that published by him in his "Observations on the Blood;" and so far from exhibiting any want of candor, that Mr. Greatrex's letter fully bears the learned gentleman out in the pretension set forth by him, that from adopting "his system" success immediately followed; for there was no other that would have caused the great diminished mortality from fever in the Royal Regiment; and that, if we were possessed of any other curative process we were criminal in not having employed it previous to his visit.

Thirdly:—We are accused of not only misunderstanding his views altogether in "talking of soda or alkalies" in the treatment of fever, which so far from recommending, he disapproves of being administered at all: considering all such the reverse of beneficial in fever; that we also prescribed supertartrate of potash, which he most highly disapproves of, considering its excess of acid as acting most injuriously on the stomach or system generally in fever—that we used the hot-bath at the times or stages of fever when we should not—in fine, that we mixed up his remedy without understanding his views or hypothesis, with every thing we should not, and even with most of those remedies which he considers injurious and destructive, and which he asserts should not have been given (oh! wonder-working remedy to cure after all) to the patients, but which, notwithstanding we did wilfully and maliciously, it would appear, administer to them, mark, reader, *for the sole purpose of depriving* him of the eclat so justly his due for the cure of fever at Trinidad!

At first glance, these may appear to some grave and heavy charges; they are made with a facility and self-complacency which leaves us at a loss whether to admire most the hardihood of assertion, or the arrogance of the individual who could have made them. Now as regards the first pretension quoted of Dr. Stevens, and his demand to what other source we owed success, but the system he recommended, and to the assertion that "the mortality of the garrison ceased from the moment of his arrival at Trinidad," I must now say, that *both his pretension and assertion are equally unfounded*; and in reference to the conversation, he states, that he held with Mr. Greatrex, at St. James's Hospital, I must be permitted to doubt the accuracy of the Doctor's report of it in the following quotation—"Dr. Hacket states, when I visited the hospital at Trinidad, I admitted the similarity of their practice to my own. Now this is a mistake, for I knew from the rate of the previous mortality that there must have been some radical error in their practice; I saw clearly what this was and pointed it out to Mr. Greatrex." And again,—"from the beginning of that year, and up to the middle of August, it is a fact that the Royals alone lost in that hospital upwards of forty men from fever; it is now generally, I believe, admitted, that the blood is a living fluid, and if so it must then, like every thing else that possesses life, be subject to disease. It is also true that the mortality ceased only from the moment that I had not only directed their attention particularly to the circumstance, that in the fever which they had to contend with, the diseased state of the blood was the chief cause of death, but pointed out the means by which they might greatly lessen the mortality by preventing those fatal changes in the vital current, which are in reality, in these fevers, the great cause of death. It is also true that, from that period they scarcely lost even a case of fever, except the three men already mentioned, which men had been beyond all redemption before they were admitted, and the other two men who died on the very day they were brought in. But I know well what their practice was both before and after the middle of August, 1829, and I know the result. I know also what these unnecessary measures were which I had not recommended, and which they unnecessarily combined with the saline treatment, apparently for the purpose of taking to themselves as much of the credit as they possibly could. They knew however of all these other measures to which they allude, previous to my visit, yet they allowed the mortality to continue up to that very period; but I shall afterwards prove, that some of these measures were too insignificant to have had any effect on the result while others, but particularly the hot-bath, were not merely inert, but actually improper, but above all when employed at the period at which they used it."

As to the first quotation, viz. that there must have been some radical error in the practice, and that he pointed it out to Mr. Greatrex—this appears to me exactly on a par with the general tone and hardy assertion, that Dr. Stevens never hesitates to indulge in; yet all which I am compelled to say, in point of fact, is *utterly unfounded*,—it is utterly *impossible that any such* observations as he states could have been made by him to Mr. Greatrex—because, in the first place, had *such* been *actually* made it would undoubtedly have been stated to me the following day, when Mr. Greatrex informed me of the learned gentleman's hypothesis of an acid in the blood! He assuredly then would have informed me of those errors in our practice pointed so "clearly out" to him, instead of telling me that Dr. Stevens approved, (notwithstanding all he now asserts to the contrary) highly of our practice, and was struck with the similarity of it to his own, and which, by the bye, en passant, I would now have the learned Doctor to know, I consider no compliment; at all events, as regards the conversation, I can only say for myself, these errors of practice, if they be errors of practice, (for the ipse dixit of Dr. Stevens *now* can have but little weight with practical men) were never stated to me:—again, I say, it was *utterly* impossible for him to have pointed out to Mr. Greatrex the errors of that practice which produced the previous mortality; for *there was no record of it shewn to him*; this did not arise from design but from mere accident, for it so happened, that the registers of our practice shewn to him only embraced the period of Mr. Greatrex's being in charge; he having joined the garrison but a few weeks before. And it will be seen by the following extract from General Orders, that Mr. Greatrex had not been previously at Trinidad, and consequently had nothing whatever to do with the previous practice, the errors of which, though "so clearly seen," it seems by the intuitive talent and vivid imagination of Dr. Stevens, for he had no other data *whatever* to go on, could not therefore, I say, be pointed out to Mr. Greatrex, either as regarding the past or as immediately affecting himself; and further, although the learned gentleman, with his accustomed hardihood, asserts otherwise, yet I solemnly declare, with the exception of using his nostrum, and which I now regret I ever sanctioned being used, for *how* highly held in estimation will hereafter be stated, there was no deviation whatever in our practice, though "its errors had been so clearly pointed out" since first fixed and permanently established about the middle of July, 1828, to the remotest period of our continuance at Trinidad, notwithstanding all Dr. Stevens asserts to the contrary, though absent himself some thousands of miles from its application.

Head Quarters, Barbadoes, 17th June, 1828.

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"No. 7, Assistant-Surgeon Greatrex, of the Royal Regiment, will proceed from Barbadoes by a similar conveyance to Trinidad."

Mr. Greatrex, in compliance with the above order, joined about the 24th of June; it will therefore be seen, he could not have been at Trinidad but a very short period previous to Dr. Stevens' visit there, in the middle or latter end of August of the same year.

Having now, I trust, fully and clearly shewn the fallacy, to give it the mildest term, of Dr. Stevens's statement, as to the "errors of practice, and his pointing them out," I have next to remark on the assertion he makes, that the mortality of the Royal Regiment ceased "from the moment of his arrival at Trinidad:"—this is a vain and empty boast, and exactly in keeping with the general highly coloured portrait Dr. Stevens so constantly indulges in of himself. It appears from the returns of the Royal Regiment, recently taken from the hospital books, and examined by me at St. Lucia, that the strength of the corps, rank and file, was about 350; that the admissions into hospital, (from December, 1827, the time of their arrival in Trinidad, to December, 1828) of remittent fever cases alone, amounted to 942; the deaths from the same 43: from this it will appear, that every man in the regiment, within a year, averaged nearly three attacks of malignant fever; consequently those of the most weakly and broken down constitutions, from previous excess, died, whilst the surviving got every day more seasoned or acclimated to the island, as usually happens to all corps; and therefore it is that the subsequent attacks of fever come down every day more to the standard of the milder form to be met with amongst the troops themselves, and very different from the intense and malignant form to be met with in first comers, or Europeans:—but as to the details of the events of the memorable 1828; the admissions into hospital from the 20th of June to the 20th of September, the finale of the Quarter, and which was one of the most rife in sickness we had experienced, amounted to 258 cases of remittent fever; the mortality amongst them was very great, amounting to twelve, exceeding by one half the death-roll of the preceding quarter; this mortality ceased on the 20th of July. From this period to the middle of August we lost *but one case* of this fever: however, in the succeeding quarter, that is from September to December, we lost five cases, the febrile admissions for the same period amounting to 224; though, let it be borne in mind, *the quoted letter* states we had not lost *one man within this said period*—yet five we lost, though Dr. Stevens, it must not be forgotten, towards the end of the *preceding* quarter, had kindly shed, by his own account, the *unassuming* mantle of his mighty wisdom over us, and "lightened our darkness" as to our future treatment; claiming, therefore, the merit of a blank death-roll for September, *following* his visit immediately; and would, I dare say, claim the same for the month of May *preceding*, in which we lost no fever case, had the light of his countenance happily shone on us or the garrison at that time. From the foregoing it will be seen, that the mortality in the Royal Regiment ceased a *month previous* to Dr. Stevens' visit to Trinidad, and not from *the moment* of his coming there, though with his usual *diffidence* he asserts the reverse; and this success commencing a month before, continued almost uninterruptedly for a month after his departure; though the succeeding quarter, as already stated, proved, it will be seen, a fatal one. Thus is shewn, that for a certain period previous to the learned gentleman's visit, and let it be borne in mind too, in the very heart of the most unhealthy period of the year, we had not lost a man from remittent fever; and after his visit it so happened, that some of those who died, were those in which his combined soda plan was tried. I do not mean to insinuate, they died from the use of this remedy, for though prescribed as an addenda, *our own established* "system" was not omitted; for, in truth, from first to last, this compound was never considered more than a mere secondary remedy, by either of us,—it was so, at least, considered by me; and if Mr. Greatrex, (who I am sure did not) entertained other sentiments, I was not aware of them: indeed, to shew the perfect indifference, or rather, let me say, the disrespect, I myself entertained for the learned gentleman's remedy or doctrines, whether it was an acid in the blood, which I firmly believe, at first, made a part or parcel of his hypothesis, when he mentioned it to Mr. Greatrex, and which, that gentleman's letter bears evidence to—or the renovation of its saline impregnation, which he now adopts; be it however which it may, at best it is of little consequence. I perfectly remember jeering Mr. Greatrex on the infallible "sodaic mixture," reminding him, the first deaths we had had for some time, was when we deviated at all from the system of practice we had established, by the introduction of any auxiliary; and though Dr. Stevens indulges in his usual hyperbole, for which, indeed, he seems to have "the bump," about some of these men having been conveyed to the hospital "under a burning sun at mid-day," yet forgets to mention, their barracks were not above an hundred yards, or thereabouts, from the hospital, and consequently, the exposure, if they really were so exposed, which I much doubt, as their comrades are always kind and attentive to the sick, must have been very trifling, and although so pathetically portrayed, yet I imagine, even if it were as described, it would not be admitted by any tropical practitioner, who was really a practical, and not merely a hypothetical man, as a just and proper reason for not removing a sick man in fever, when the necessary promptness and activity too, in his treatment, is considered, and when the hospital and barracks of St. James's and the Artillery barracks approximated so immediately to each other. And here let me observe, whilst Dr. Stevens can find an easy apology for those dying to whom this remedy was administered, viz. "three being beyond redemption, and two dying the day of their admission into hospital." Is it not strange, too, when he talks so arrogantly of the "previous mortality" in the Royal Regiment, that it never struck him, a similar apology, did we deem any requisite, might also be adduced for that said mortality, different in no respect, in a great number of instances, from those five cases he mentions? Had he less self-sufficiency, might not this also elucidate for him, ere he gave way to vain boasting, the "fact that the Royals alone in that hospital lost upwards of forty men from fever," many of whom were beyond redemption, nay, even died on the very day of their admission; and yet, after all, be it known, even that mortality amounts to little more, at a rough calculation, than four per cent of the admissions, which I have already stated to be 942. By the bye, I cannot omit noticing here, another instance of the hardihood of assertion, though generally founded on some paltry quibble, that Dr. Stevens indulges in, when he declares, "not one of these men ever had a particle of soda administered to them;" when he ought to have known, particularly when he "saw so clearly our errors," or from Mr. Greatrex's letter, or from what was related by me, that either the carbonate or subcarbonate of soda, in solution with toast-water, was the common beverage, *ad libitum*, for every fever patient in hospital.

To revert again to the vaunted death-list of the Royal Regiment having been so great *before*, and so small *after* the Doctor's visit; and as great stress is laid by him on this point, as conclusive evidence in his favor, the answer is plain: the corps had but the last of the preceding year, landed in a sickly island from Barbadoes, and had to undergo what is emphatically though vulgarly called "a seasoning," sufficient, it will be admitted by those who know the tropics, to account for a great mortality; but, alas! for the credit of the profession generally to relate, another cause I fear existed: willingly, *most willingly*, would I cast this in oblivion, but (I cannot help saying it) the almost unprecedented assurance of Dr. Stevens—unprecedented, at least, among gentlemen, and foreign to the feelings or conduct of all those civil or military I have been in the habit of associating with—and above all, the wish to guard the public by a fair and explicit statement, from his representation, however repugnant to my personal feelings, and I confess it is painfully so, now force the detail from me. The Assistant Surgeon of the Royal Regiment, who accompanied it to Trinidad, and was in charge of the corps there, had long given me great dissatisfaction, to say the least of it, by the slovenly manner the sick were generally attended to, as well, indeed, as by the way the whole hospital duties were performed,—drunkenness, almost habitual, was the cause; this I long suspected, and as soon as a fair opportunity of prosecuting it to conviction occurred, charges were preferred by me for that offence, and consequent neglect of the sick—he was tried for the same, and dismissed by his Majesty from the Service, with comments on the degree of his offence: his immediate successor, sent to take charge of the regiment, most unfortunate both for the garrison and myself, proved even worse, and more habituated to drunkenness than the former,—most unfortunate, I say, for the well being of the regiment, in having such a character in charge of it, and in giving me a disagreeable degree of notoriety throughout the whole command, being obliged, in justice to the sick and the service, to place him also in arrest, and prefer similar charges as in the former case; previous, however, to the assembling of the Court Martial which was ordered, he died from intoxication. It is well known to all conversant in West India fever, *minutes*, comparatively speaking, are *hours*, as regards the application of our remedies. Notwithstanding I gave all the attention to the hospital my other avocations permitted; yet from such characters as the foregoing, it is evident the sick could not have had all that ready and watchful attention so peremptorily required in a tropical climate, rendering themselves incapable either of prompt attention, or the use of their faculties, from frequent intoxication; and, most strange it is to say, yet any one conversant with military affairs will know the fact, how long such a state may exist in those who have charge of an hospital, without a single individual connected with it, or even the sick inmates themselves exposing the fact; nay, they would rather, on the contrary, conceal it from those who might and would take cognizance of it. Are not these sufficient reasons, let me ask, to account, in some, at least, if not in a great measure, connected with all I have previously stated, for the mortality in the Royal Regiment, without adverting at all, as a contrast, to the wonder-working effects of Dr. Stevens' "sodaic mixture" afterwards? Let it be also borne in mind, *our successful system* was established previous to the so much boasted "*veni, vidi, vici*," visit of Dr. Stevens to Trinidad.

When I contemplate the foregoing, I acknowledge there does seem to me something *exceedingly* ridiculous, in being necessitated thus to come to actual detail, and be obliged to particularize every minute circumstance, to repel the unfounded pretensions of such a practitioner, who doubtless might have come, as he states, in consequence of hearing, that fever then prevailed at Trinidad; though this ostensible cause, the gentleman himself, or those who accompanied him, did not then give out; and if such had really been the motive of his excursion, one would have thought he would have *made a point* of seeing me, the then principal medical officer, and not be content with a mere visit to the hospital. But divesting his statement of what I cannot help deeming *flim flam*, the fact was, a Danish brig of war, as they are in the habit of doing, came on a cruise to the Gulf of Paria; Dr. Stevens availed himself, as it was then said, of the opportunity of visiting the island, both for recreation and pleasure, and accompanied her. I hate any thing like illiberality, and love my profession too well to attempt to shut the door of any military hospital, under my control, against any practitioner who might desire to visit it; on the contrary, I have *most gladly* always received those who were pleased to come to our hospitals, shewing and explaining every thing connected therewith; but, I confess Dr. Stevens's conduct has a tendency, at the present moment, to engender doubt and suspicion in my mind towards all such visitors in future.

Ere I take leave of this part of my subject altogether, I have to state that although, in conformity with Mr. Tegart's recommendation, croton oil *was always* more or less used in the hospital, yet I confess I was blinded by prejudice, and little encouraged to its more extended use by the professional men I spoke with on the subject. So strong was this prejudice, that, instead of applying the remedy in the fair and regular progress of fever, which I should have done, it was, I now deplore stating, never, perhaps, administered but as "an awful remedy," in fact a dernier resort, "when hope had fled," and when fatal symptoms had already exhibited themselves—*then*, and *not till then*, was this most invaluable oil prescribed. The mortality, however, that took place in the early part of July, 1828, and its extraordinary effects in one or two particular cases around us, leading to a more early exhibition than we had hitherto been wont of this most powerful febrifuge, the effects produced, without any exaggeration, were really astonishing—so much so, as to daily embolden us more and more in the exhibition of it, either in large and repeated, or more frequent small doses, and in enemata also; so that, from sheer practical experience of its effects, greatly heightened, as we afterwards discovered, when in combination either directly or alternating with large doses of quinine, we imagined this remedy approached nearer "a sovereign one" in tropical fever than any other, be it what it may, that ever has as yet been adminisrered in any disease. I say not this at random; I state it, I repeat, from sheer practical experience of the really wonder-working effects produced by it in the most malignant form of yellow fever—effects were frequently noticed both by the serjeant and orderlies, and indeed the servants generally of the hospital, so remarkable and striking were they. Corroborative of what we really attributed our success to, independent of those letters I forwarded to you from many of the practitioners at Trinidad, and as proof of what we considered our chief stay in tropical fever, the following extract of a letter of mine to Sir James M'Grigor, relative to the state of the garrison at Trinidad, will, I trust, be deemed a sufficient refutation to the statements of Dr. Stevens, that to disguise the advantages we obtained from his recommendation, and to deprive him of the eclât his just due, we mixed up his remedy with "useless," "inert," (croton oil and quinine useless and inert!) or even prejudicial ones, to secure to ourselves a merit we did not deserve!! I forbear any comment on the spirit that would engender *such* an idea, and envy not the moral constitution of that mind which could cherish, much less give utterance to, such thoughts;—and, in reference to the letter alluded to, let it be borne in mind, when I wrote that letter I had not the slightest expectation of any claim being about to be set up by Dr. Stevens, or indeed any other person, and it will still serve to prove *how little*, in the curative plan of treatment, his saline medicine was thought of, by its being perfectly unnoticed by me, when, too, I could have no possible motive for concealment—at least none of the exceedingly base and unworthy motives attributed to me so unreservedly by the *elegant* and learned author of the saline doctrines. Indeed, I would appeal with confidence to all my confrères who know me, or with whom I have ever done duty, if they ever noted in me the *slightest* inclination to withhold the meed of praise from any individual, civil or military, be he who he might, from whom I derived a practical hint;—yet a person, totally unknown to me, and to whom I am totally unknown, hesitates not to impugn my motives, and publicly charges me with the basest and vilest intentions. But, to return from this digression, the following is the extract alluded to in the forgoing, dated Trinidad, August 10th, 1829.

"I avail myself of this opportunity to tell you we have had a severe invasion of tropical fever at St. James's, commencing about the 30th of July, of which, too, the shipping in the harbour partake; since when our admissions have been numerous, and some of them of the most intense character I have ever witnessed; but the mode of treatment established here is such, that we contemplate the most formidable attack, but with little, if indeed any, apprehensions for the result. The cure of this fever is at this station almost reduced to certainty; otherwise I am satisfied, from the great intensity of very many of our admissions, and the consequent deaths likely thus to ensue, a universal panic would now be existing in the garrison, whilst encampment, fumigation, and white-washing would be the order of the day.

"I beg it may not be supposed I arrogate to myself any merit for this happy issue; I pretend to nothing but a rigid observance of the rules laid down by the admirable, and, let me say, illustrious Jackson, which, aided by the croton oil of Mr. Tegart, and which, independent of its purgative properties as a febrifuge, he justly remarks *cannot be too highly spoken of*; and seizing the first remission to administer twelve grains of quinine, for which quantum we are indebted to Mr. Corvin, hospital assistant; and, finally and lastly, to the *never-failing*, constant, zealous, and indefatigable co-operation of Mr. Greatrex, assistant-surgeon, Royal Regiment, this happy result is due."

When I reflect on the various professional conversations I have held with Mr. Greatrex on the peculiar cases that occurred of fever, and the really extraordinary powers of croton oil exhibited therein, and the confidence we therefore both felt in the combined practice set forth above—for in all and each of these were founded our strongest hopes and best expectations, founded, I say, on no fanciful hypothesis, but on the practical results daily exhibited,—I cannot, I confess, suppress a smile, though perhaps somewhat mingled with indignation and contempt, at the special pleading of Dr. Stevens, in support of his *trumpery*; and am strongly inclined, notwithstanding all he pleases to say in favour of it, to agree with Dr. Nelson of Trinidad, in reference to Dr. Stevens's hypothesis and treatment—"a practice, I am sure, he himself would not rely on in tropical fever." It is not unworthy of remark, that Dr. Stevens seems to forget the evil spirit of disguising his remedy which we are charged withal; for, in the latter part of his reply, in a whining tone he states, "they knew not the advantages they obtained from it." Now it is very possible, that the Doctor's hypothetical reasoning may have had some weight, which I am led to believe it has, with the profession at home, though rejected in the Tropics; and, alas! that such stuff should be received in London, yea, and quoted too!—though there are doubtless many there, as well as elsewhere, who are not only caught with novelty, but love to range in the wide field of medical speculation—I will not call it science—however unfounded it may prove. but for me, reflecting on the numerous theories carried into practice, founded alone on hypothetical reasoning, within the last half-century, and which have long since been abandoned and passed away even from recollection, and whose peculiar lot it has been for some years past to witness fever in all its forms, from the mildest to its most aggravated and malignant character; where promptness, activity, and decision were unceasingly demanded, and where the remedial means were not only of the *most active kind known in practice*, but employed with an energetic boldness, called for by the imminent danger of the patient, though stated by Dr. Stevens as "inert and useless," and used with a most perfect confidence, arising from their *experienced* and *well-known* efficacy in combating it; under such circumstances, can it be believed I would lend myself to an hypothesis, which, as far as I know of its principles, my reason condemned, and which, in truth, from the moment first mentioned to me by Mr. Greatrex of its humoral origin, only excited a smile, and was never after thought of by me—as I firmly believe, with all due deference to the great Dr. Stevens, that the whole series of the phenomena exhibited in fever has its *sole* and *only origin* in the influence of the nervous system generally, whilst through its ramifications particular or peculiar organs become more or less affected. It is through this system that the secreting organs cease to perform their functions, though the circulation, as has been experimentally proved, may, nay does, still continue; but thus becomes deteriorated, and travels its weary round without any replenish from those sources which, nearly or altogether ceasing to perform their functions, become, as it were, locked up. The blood thus becomes altered, and in the venous circle may become of a darker hue, though its peculiar and characteristic colour in the arterial circle continues, equally as it is found in disease in Europe, to the last moment of life. And whilst on this subject, let me say, according to my experience, the blood of all those who die of acute disease, whether in the Tropics or in Europe, or in the Canadas, or in Nova Scotia, invariably presents the same identical appearance, without the slightest discoverable difference. This recals to me the tirade Dr. Stevens indulges in on our practice, more especially the use of the warm-bath in fever, unreservedly condemning its use in *toto*, but more particularly in those stages of fever in which *he says* we employed it, though perfectly ignorant himself what these stages were; for all that he knew of its use was from Mr. Greatrex, who thus writes:—"We placed the patient in a hot-bath, at 110 degrees, and when well heated and he perspires, open a vein, and take away from 36 to 60 ounces of blood, &c." I would ask Dr. Stevens, does it necessarily follow that the access of fever in every individual is "a burning one," or marked by high excitement? Did Dr. Stevens really practically know what he presumes so didactically to write about, he would know the worst and most insidious form of fever to be met with in the Tropics, is that in which there is little perceptible excitement or little to be discovered, either from the pulse or skin, at the *onset*, but marked with a peculiar and indescribable cast of countenance, and that it is not "a burning fever," as he expresses it, yet which requires the most prompt and active treatment, to cut it short at the very commencement, far different from the kind of medicine expectante he advises; else, if lulled to security by the apparent mildness of the attack, it soon exhibits its malignant and deadly character, whilst the post-mortem examination shews to how great an extent it had carried its ravages even in the short space of perhaps 48 or 70 hours. I would not have it at all understood as being apologetic for the times or stages of disease at which we had recourse to this *invaluable remedy* in tropical fever; but to show that Dr. Stevens, notwithstanding what he asserts, could not possibly know under what particular or peculiar circumstances the hot-bath was or was not used. The objection made against this mode of practice is, it seems, according to this most didactic Doctor, that the blood was *already too red* for such treatment. How the learned gentleman discovered this I am at a loss to know; for, I nevertheless take on me to say, from experience in blood-letting, that, bleed at what stage you will in fever out of the hot-bath, the blood *never*, I may say, so very few are the exceptions, presents any difference whilst flowing in this or that stage from its natural dark venous hue, though it may present a more or less firm crassamentum, with a greater or lesser quantum of serum, when cooled, and when also occasionally is exhibited a buffy coat; but, as to its *mere colour*, I again assert, there is no deviation whatever from its dark natural venous hue, at whatever stage you may subtract blood from a vein; and, as to the colour of the arterial blood, it is always the same, be it remembered, Dr. Stevens, though you have misrepresented this fact, let us charitably suppose *ignorantly*, to the College of Physicians.

The combination of soda with nitrate of potass is doubtless, under certain circumstances, as good as *any other* saline medicine to act on the secreting organs, when once *aroused* to impression; but I fearlessly assert, of not one whit more value than any of the neutral or purging salts, either in combination or separately given; or than the abused supertart. of potass itself. Such were the views and *no other*, having no reference whatever, as far as I was concerned, to Dr. Stevens's doctrines, our ignorance of which he justly accuses us of; for, in truth, they never made the *slightest* impression on me, that led to my acceding to Mr. Greatrex's desire of prescribing this remedy at St. James's Hospital, which, as already stated by me, was frequently given; and when I admit this, having no wish or desire to disguise any part of our treatment, be it also known, in the worst and most formidable forms of fever we had to deal with, such as might be termed malignant, aye, in many hundreds of cases, the administration of this remedy was *never thought of*, much less given. Further, in my own case, in September, 1829, whilst labouring under the malignant form of fever, then epidemic, relative to which I have already given an extract of my letter to the Director General, and though in imminent danger of my life, yet not one particle of this so much vaunted remedy was administered to me. Enemata, shower-baths, croton oil, and quinine, were the routine of our practice, as already shewn, and the remedies TRUSTED to, with bleeding at the commencement, *in the hot-bath*, nearly ad deliquium. And whilst Dr. Stevens dogmatically reprobates its use, never shall I forget, though almost exanimate on coming out of it, the grateful relief I experienced from the intolerable head-ache and general pains that pervaded my whole system. In face of all this, Dr. Stevens asserts, "from my own statement, or that of the Trinidad Army Physicians, though they endeavour to disguise it, yet 'tis clearly proved, 'tis to the saline treatment they really attributed their success." Surely, if such was the case, and we had really cause to be satisfied of its potency, let me ask, can it be supposed I could be so stupid, when my life was at stake too, not to have demanded it, or Mr. Greatrex, who was my principal attendant, though visited by all my professional friends at Trinidad, not to have prescribed it for me? This one instance will speak volumes, and evince the estimation the combined soda was held in, and its classification amongst us, *merely as a very secondary remedy*.

At the very onset of what now has assumed the character of a controversy, I would desire it not to be forgotten my disclaiming entering at all into the hypothesis advanced by Dr. Stevens, considering it, as I said then, the mere ephemeral "running riot" of a vain and restless spirit for notoriety; yet a disputation on this said hypothesis is endeavoured to be fastened on me, as though I must of necessity have been connected with and participated in Mr. Greatrex's opinions, as stated by him in reference to the conversation that took place between them at St. James's Hospital, allusion to which is made in the letter he addressed to Dr. Stevens. I have now, therefore, to request it may be clearly and distinctly understood, however I may be induced, en passant, now to notice it, that in taking up my pen it was purely for the purpose of giving a plain statement of practical and anatomical facts—to inform the profession of the real state of the case—to disabuse them from the errors they might be led into by giving credence to a writer who, reckless of consequences, claimed for himself that which, under similar circumstances, I will take on me to say none of gentlemanly feeling in the profession would for a moment even have dreamt of doing;—and whilst I am accused of artfully applying, with an intention to mislead, the term "soda," in lieu of his combination of muriate of soda and potass, yet had not himself the candour, though well knowing how extensively it had been used both from our books and from the very strong testimony given of it in Mr. Greatrex's letter to Dr. Stevens, to say one single word, or make the slightest allusion to one of the most powerful, effective, and extraordinary remedies, not only in fever, but also in all those diseases in the nosology of Cullen classed under "nervous," that ever was exhibited; from which I am led to think, as well as from the splendid discoveries of late years, relative to the functions of the nervous distribution, that had that learned Professor lived in our days, he would have classed fever as an order of "neuroses," which he seems strongly inclined to have done, and not as it now appears in his works. The following is what is stated to Dr. Stevens by Mr. Greatrex, yet is withheld, *from candid motives no doubt*, from the public and the College of Physicians, when he made his memorable statements. "From the time of his waking now, or in a few hours, we administer the croton oil, agreeably to the directions published by Mr. Tegart, in the London Medical and Physical Journal, for August, 1828; and *the effects of this oil, as they have appeared in some hundreds of cases* which have come under my observation in Trinidad, *fully support the high merits which Inspector Tegart has assigned to it.*" Let us go no further even than this one passage, and let me ask if it is not sufficient in itself to stamp Dr. Stevens's want of candour and fairness? at all events it cannot fail to establish his insatiable vanity and egotism;—and notwithstanding the clearness and evidence of the above passage, the gentleman still supports his unqualified assumption in the commentary he makes, in reply to my statement to you, on Mr. Greatrex's letter, though his pretensions are not in one single instance supported by the letter itself, notwithstanding all he had himself said at Trinidad in favour of his mode to the latter gentleman. He, it would appear, was inclined to favour these doctrines yet, with the fairness and candour of an honest man, after telling him he had administered the remedies as advised, continues—"but with what *particular effect*, I regret to say, *I cannot determine* for you, in consequence of its being *mixed up with the effects* of *several* other measures which we are in the *habit* of *adopting*." Not one word of marked beneficial effect (yet the reverse is published,) have we here stated on Dr. Stevens's behalf; whilst, on the contrary, let it be observed, a marked and decided preference is clearly given in the foregoing eulogy relative to croton oil—yea, "having been tried in some hundreds of cases, and fully supports the high merits which has been assigned to it, &c." and let it be noted, for I know the fact, that these very "hundreds" above quoted are those which Dr. Stevens has asserted were cured by his nostrum. Again, as regards quinine in large doses, "we were led to this practice by a medical officer telling us it was given in that quantity on the Coast of Africa with *the best effects*, and *such have been the effects here*." Mr. Greatrex, after adverting to Dr. Jackson's modus medendi, which it will be observed we had adopted, and which he thus introduces—"The way *we combat* fever *is agreeably* to Dr. Jackson's *system*, so admirably set forth in his invaluable work,"—and thus concludes, "under Divine permission, the *above system* (the principal and leading features of which he had detailed with a favourable commentary) has been applied to 340 cases or thereabouts, &c. and with such success, that, during the last seven months, not a case died." Let us here pause, and ask, would any man, with any sense of propriety or of feeling, or common decency, apply, much less publish, from the foregoing quotation, the "system," the integral parts of which are respectively so highly spoken of, exclusively to himself? when the best, after all, it will be seen, that is said of Dr. Stevens's recommendation is, *most dubious*; for "he regrets, with what particular effect he cannot determine, because it is mixed up with various other remedies, &c."—to which, let it be observed, are given the most marked expressions for the beneficial effects, *according to recommendation*, THEY *are found to produce*. Surely with some propriety, and I do think most deservedly, might Mr. Tegart lay public claim to the merit of successful treatment, whilst even with him it might in some measure, and with some little shew of justice, be disputed by the gentleman who recommended to us the powerful auxiliary of *large* doses of quinine in lieu of the more minute and frequent ones we had been in the habit of giving, were they of the same temperament and monopolizing spirit that so eminently characterises the author of "Observations on the Blood;" and whilst I admit a full measure of credit to both these gentlemen for the benefits we derived from their recommendation, yet I much doubt if any plan of treatment in tropical fever can ever be remarkably successful, unless aided by the exertions of a *most watchful* and intelligent medical officer.

I have stated two instances, in which the garrison was unhappily deprived of this assistance, and the consequence that appeared to me to arise therefrom; but the reverse of these I ever found Mr. Greatrex, and to his exertions, aided by croton oil and quinine, the subsequent success must be attributable. And here I would ask the profession to contemplate the well-known powerful effects on the constitution of either of these remedies, whether given separately or in conjunction, as we often administered them; —when this is considered, let them say, can we be blamed for calling Dr. Stevens's pretensions *presumption*, or class *his* muriate of soda and nitrate of potass but as the *veriest trumpery*, since the days of Perkins's metallic tractors, that ever has been attempted to be pawned on the medical public as a wonder-working remedy in fever? Under "Divine Providence," the recorded system however, of which both the foregoing stated remedies formed with us the *most marked* and *prominent features*, and which, let it be always remembered, *were never omitted to be administered to a single case of the* 340 *alluded to*, was, notwithstanding Doctor Stevens's assertions to the contrary, pre-eminently successful.

Doctor Stevens asserts, that my dissection reports entirely agree with the appearance of the blood he has stated. This is indeed assertion with a vengeance. The fact is, seeing the absurd and unsupportable ground he had taken, he now comes round to my statement, gilded over with that special pleading, apparently so congenial to him, and, as it were, forgetting (and, I dare say, for his own credit, sincerely wishing it to be forgot) "the dark watery black ink blood" so piteously and poetically previously expressed as occupying *alike* both circles of the vascular system, states now, in allusion to one of them, that 'tis dark, grumous, nay, hè would say, viscid—but is perfectly silent as to the assertion he was pleased to indulge in about the contents to be found in the arterial circle.

As to the graphic portrait of the fever he has favoured us with, it seems now it is but a solitary exception. Exceptions, we are taught to believe, only strengthen a general rule or description, such as I have given; yet, from this solitary exception alone, if ever such existed but in his *imposing* imagination, Dr. Stevens comes forward with an hypothesis, kindly to enlighten the profession! "ready cut and dry," to meet all exigencies, and all classes of tropical fever. He disdains misrepresentation or want of candour. Here again we are at issue, and here again I arraign him of both. I have already pointed out his want of candour relative to Mr. Greatrex's letter, and now accuse him of knowingly, wilfully, or albeit ignorantly, misrepresenting tropical fever generally, and doubly of misrepresentation, contained in the following quotation:—"In both cavities of the heart the blood is equally black, and in the whole vascular system all distinction between arterial and venous blood is entirely lost:" and again, "the colour of the whole mass of blood, both in the arteries and veins, was changed from its natural scarlet or modena red to a dark black." This is not a fact; I am bound to say, it is *absolutely* and *utterly without foundation*. There is no blood in the arteries after death in tropical fever cases; consequently it is a mere flourish of the learned gentleman's to introduce his hypothesis, which I should be inclined to liken to the flourish or clash of a high sounding orchestra to introduce a new pantaloon in a new pantomime—to say that all distinction between the arterial and venous circle is lost, and that the blood is changed from its natural colour to a dark black. In the dead subject, in this disease, I repeat that the arteries are invariably empty. I repeat this not only on my own authority or observation, but on that of all the tropical practitioners I have conversed with on the subject. I also deny *clearly*, *distinctly*, and *positively*, that any change from its natural scarlet characteristic takes place in the living artery *in the progress* of fever. Conversing with Dr. Musgrave, a most respectable practitioner of Antigua, and not unknown to the profession, on this most strange assertion, sent forth to the public, he reminded me of the case of an officer of rank belonging to that garrison, to whom he was called in, and who died of malignant fever a few days previous to my arrival there, and whose temporal artery was divided an hour or two before death, yet the arterial blood was in no way different in hue from its natural colour in health.

To advert to Dr. Stevens's boasted hypothesis: and again, I say, alas! that such sorry stuff should occupy the attention or be food for debate in the profession—whilst he lays it down that the blood owes its red colour to the salt it contains, as well as its preservation, "in common with the waters of the deep, owing the power of self preservation to their saline impregnation;" and states that death takes place in tropical fever from the blood being deprived of its saline constituents, nay, adduces as positive proof of this, "the dark black ink-like appearance of both the arterial and venous blood." Here again we are at issue; for we have shewn the *absolute reverse* of this assertion is the *real fact*—that the colour of the arterial blood, from the commencement to the finalé of fever, whilst blood is contained in that circle, preserves its own peculiar scarlet hue, fully establishing, in my mind, the commonly received opinion of the blood owing its florid colour to its transmission through the lungs;—and as to the blood generally being in a state of apparent dissolution, I would ask how it can be otherwise? When secretion mostly, if not altogether ceases, it is then deprived of the pabulum vitæ, and must eventually become deteriorated and unfit for the purposes of supporting life. I shall now add that, until the learned gentleman proves, by actual *bona fide demonstration*, the truth of his assertion, in contradiction to what I have, in common with all other tropical practitioners, noted and seen—"that all difference between arterial and venal blood ceases, and that both alike assumes the watery dark black *ink* colour in the progress of fever," which, be it remembered, is the "head and front" of his hypothesis—the whole baseless fabric must fall to the ground, even in the estimation of the most credulous; and, till he demonstrates—for, let it be remembered that, if true, it is to be demonstrated—mark, I say, *demonstrates*, before credible witnesses too, on the living subject, the unqualified and most extraordinary assertions made to the College of Physicians and the public generally, the profession can be at no loss to appreciate either the correctness of his statement or the immediate views that dictated them.

To revert again to the "art" Dr. Stevens discovers in my using the term "soda," &c. I utterly disclaim the accusation. I made use of the term of the *base* for his compound without really any precise or defined intention, more than to mark, perhaps, a certain degree of contempt for the boasted hypothesis, and the remedy founded on it, and so vaunted as a specific in fever, its author giving in support of it *imaginary*, at least, let us say, dissection reports, assuming therefrom false premises, and arguing from them as *established* facts. Let it also be remembered, however designated occasionally by me, that the actual composition of his "sodaic mixture" was fully stated: and, as "a rose will smell as sweet by any other name," I fancy the virtue of his nostrum was not rendered the less potent by the term I happened to give it! I have, therefore, no right to be taxed with unfairness or art on that account. In the "display of my deep research," I recently availed myself of the published opinion of Dr. Paris, on the *principle* of curing disease through the medium of chemical action, or, now let me add, mechanical action on the blood; for I consider the *principle* of both exactly alike—a *principle*, be it remembered, as old as the hills; and a principle, be it also borne in mind, abandoned, because of the mortality produced by acting on such a truly fanciful hypothesis; yet, I might almost say, this very identical *principle*, (for the one is to destroy by chemical agency the presumed excess of *a something* the blood might have become injured by; the other mechanically to supply the deficiency of a constituent, equally presumed, it has become deficient of) in fact, the humoral pathology is at this time of day, after the quietus of a century, brought forward to give eclât and celebrity to its author!

Having, I trust, fully replied to all Dr. Stevens has advanced in support of his pretensions, it now remains for me to remark on the "God bless him for it" evidence of the letter brought forward to substantiate the learned gentleman's claim, and, without meaning to advert to the folly of calling in vulgar opinion as corroborative of medical success in the treatment of disease, using that term to designate those who give opinions on professional points with which they are totally, and, I might say, necessarily unacquainted, but knowing the person alluded to, to be "a plain blunt man," whose habits, since I have known him, lay diametrically opposed to professional rules or pursuits, and who had nothing whatever to do with the hospital, or the treatment of its inmates, or, in truth, interested himself *in any way* practically on the subject, I am at a loss to know how such a person's testimony could be supposed corroborative proof, "strong as holy writ," to substantiate the pretensions of Dr. Stevens, adduced, too, as an upsetting proof to what we have advanced as our chief stay and principal prop in tropical fever. To point out the great inaccuracy of this kind of evidence on a mere numerical fact, in which one would suppose there could be no mistake, the writer says, "tell Dr. Stevens since he was here (now four months yesterday) the Royal Regiment have not lost a man;" whilst it will be seen, from the returns I have already stated, we had actually lost five within the same period! So much for the accuracy of this description of evidence. I however made it my business, in consequence of the above, to wait on the officer alluded to at Morne Fortune, when lately at St. Lucia, and spoke to him of the quotation Dr. Stevens gave of his letter, wherein was given unqualified praise to that gentleman for the successful treatment of fever, &c. he smiled at the learned gentleman's credulity, and said, "why I took Dr. Stevens to be a man of sense, but what a bl———d he must be to quote me, or introduce me at all in his publication, for any thing I may have said or written on a subject I really knew nothing about. I knew nothing, he continued, of what was going on in the hospital, or the treatment of the sick there." But it seems, said I, notwithstanding, you wrote to some person, giving to Dr. Stevens all the credit for the cure of fever at Trinidad. "Why," he replied, "you may remember, on or about the time of Dr. Stevens's visit, we became healthy; and hearing something of a new plan of his for treating fever, I took it into my head, that he might have given some hint to Greatrex, but I really knew nothing whatever of the hospital practice, and had no particular meaning in what I wrote." It is a pity, in despite of what he had himself from the best source, Mr. Greatrex, that Dr. Steven's temperament disposes him so easily to construe, in his own favour, whatever may be written, or so greedily to swallow up, no matter from what source, whatever is flattering to *self*. It appears the Doctor was predisposed to this "sweet unction," and therefore willingly lent himself to the delusion, giving a broad interpretation to what, at best, was merely meant by its author as a French compliment. I imagine it will however serve as a lesson to the officer alluded to, to be more particular in future, and not pass hasty opinions on subjects, under his hand too, of the merits of which he must needs be totally unacquainted, and of which advantage may be taken by those whose delicacy may perhaps be rather obtuse when self is concerned.

There seems to me a *tinsel* display of scientific research strikingly observable in the history of the Doctor's hypothesis, which I am induced here to take notice of, however foreign it may have been to my previous intention to do so. Even in the prefatory page of his "Observations on the Blood," we find it in the dissection report he has indulged us with, the most minute examination, it seems, of the *ablest* anatomist of those who died of *his fever*, could not detect any lesion of structure in any part sufficient to account for death, till, says he, "we examined the state of the once vital fluid, which, in both cavities of the heart, is equally black, and in the *whole vascular system* all distinction between arterial (ay, in the dead subject too!!! credat Judeus) and venous blood is lost." Here, then, by this scientific author's account, the enigma is at once solved, and thus these fluid appearances in death are made to explain the cause of death itself. The secret is now out—from the acute discernment of the learned gentleman's discovery, with perceptions peculiar entirely to himself, and not within the pale of vision of the whole of the tropical practitioners, that not only the veins, but even the arteries! are full of watery, thin, black, ink blood. From such premises as these, let it be recollected, he states he arrived at his conclusions, and henceforward proceeded to the application of his means, to renovate the dark, black, watery, ink blood in the arteries;—for I may be allowed, as the gentleman "so clearly" and so unequivocally states all distinction ceases, to give a part for the whole of the circle—to give it consistency, and furnish it with the *presumed* saline properties he conceives or asserts it had lost, and thus, in fine, to cure fever. This, I believe, is the "cream and marrow" of what the learned gentleman advances, which being, he states, done at proper time and season, the blood is regenerated, the fever routed, the cure made perfect, yea, proved, he says, in some hundreds of cases in the West Indies, equally, I imagine, *as well authenticated* as those I know myself of, and quoted to the public from Mr. Greatrex's letter. As to the resemblance "of the waters of the deep owing their self-preservation to saline impregnation" in common with the blood, we must say it is a gratuitous assumption at best and unworthy of notice; for we have no means, chemical or other, to detect any thing saline in the waters of the deep lakes of fresh water common both in Europe and America; therefore this assumption, in comparing an animal fluid, like the blood, to sea-water, must be taken for as much as it is worth—nothing. By the bye, this reminds me of the "ingratitude" we are accused of in not acknowledging the debt we owe to Dr. Stevens, for giving us this *bright* idea, as a beacon to guide us in practice, and also for "so clearly seeing and pointing out to us the cause of our mortality in fever." The want forsooth, or diminished quantum of sea-salt in the blood, which he says, being replenished by being taken at proper times and seasons, by its colouring powers and renovating properties, banishes disease and saves life. This he elucidates by the so often repeated black watery ink blood, found, he asserts, in the whole vascular system, but which, alas! for the stability of his doctrines, is but a mere assertion, unfounded alike in truth and in fact; and I must say, whilst his hypothesis rests on this wretched baseless foundation, that no credence whatever can or ought to be given to any treatment of fever founded on it. I am inclined to think, with better pretension, I might retort the charge of ingratitude on the learned gentleman himself, for his perfect silence, and noticing in no way whatever, my setting him right in his report of the state of the fluids, of what is *actually to be seen* in the progress of fever, and what *is not to be seen* in death, in shewing the empty state of the arterial circle on the one hand, and the blood in the venous *diametrically the reverse* of *what he states* on the other.

There is a strange inconsistency, too, relative to fever, in the work this gentleman has indulged the public with, observable from first to last of the publication. In the beginning will be found—"there is no excitement sufficient to injure the solids." As we proceed, we find—"when proper means are used to protect the organs from the *increased excitement* during the early stage of disease, and after excitement is sufficiently reduced, when proper nourishment is given, and *certain saline* medicines are *timely* and *judiciously* used, the bad symptoms are prevented;" and consequently no man can be so qualified—happy news for the good folks of England, who actually, at this present moment, possess *such a treasure* amongst them, to give them certain salines, *timely* and *judiciously*, as the erudite writer himself! Now, I would ask any tyro in medicine, what is really all this we read, particularly the context of one part of this work with the other but *verbiage*, yea, *downright verbiage*. The writer starts, let it be remembered, as a disciple of the humoral pathology, and introduces a *fancied* case of tropical fever to support it; and terminates apparently by being a solidist, talking of "protecting the organs from the increased excitement:" and, again, "after the excitement is sufficiently reduced, and proper nourishment given." Without further noticing the discrepancy so apparent, I would ask, who that knows any thing of fever, or its treatment, would prescribe any nourishment, properly so called, until the excitement had nearly or *altogether* abated? then, and not till then, the secreting organs have commenced their respective offices—then, and then only can the stomach receive, with impunity or relish, food—ere this takes place, food or nourishment, beyond the merest slops, in small and very minute quantities, should not be given; otherwise it oppresses the stomach, acts on it as a foreign body, and consequently tends to increase excitement, and to add to the already existing evils: and again, for the sake of common sense, divested of all the affectation of professional jargon, what, I would ask, is the reduction of excitement but the abatement of fever? The morbid chain of disease is now broken, the cure "progressing," without too "the timely application of certain saline medicines;" for it is evident the nervous energy heretofore impeded has become renewed, the glandular system has commenced its natural functions, the pabulum vitæ is thus furnished to the nearly exhausted circulation, and let it be ever borne in mind, the stoppage of healthful secretion is the leading feature of *all febrile* affections, whether tropical or otherwise, and therefore demands our most particular attention; for herein, I fearlessly contend, is "the head and front of offence" immediately indured by the frame *generally*. Is it then to be wondered at, that the blood should participate in the contamination engendered all over the "mortal evil," and suffer serious derangement? I repeat, in all its constituent parts, when without any perhaps, or at most a very scanty replenish from the secreting organs it went its "weary round" of the body.

A service of seven years in the West Indies (a regular transportation) has taught me that whatever hypothesis or treatment of fever, it pleases any man to indulge in, his success in its treatment will always depend on the importance he attaches, and the ratio of attention he pays to the secretions, as a primary object. When the practitioner rigidly attends to these, I do not mean by constantly prying into night-chairs or chamber-pots, with a *seeming* learnedly scrutinizing examination at each returning visit, (indeed I have often, I confess, been struck with the ridiculous resemblance of the sapient curious look exhibited by some professional men I have met with in life, examining "the loaded vase," to that of a magpie peeping into a marrowbone; for both seem, with the same meaning, to look, and chatter, and pry again) for I contend, that the reports of an intelligent attendant on these degrading and disgusting examinations, are, in ninety-nine cases out of a hundred, quite sufficient, together with the tact common to most practitioners accustomed to treat disease, to inform him, in conjunction with other striking appearances, such as, the countenance of the patient, a grand desideratum in practice, aided by what the tongue presents, and feel of the skin, and actual posture of the body, that he has or has not yet attained his object; and therefore, I say, *faithfully* indicate his future proceedings. For I must say, I do think there is often as much quackery, and as much attempt, by many, at scientific imposture in the examination of a filthy night-chair, as in any other legerdemain, let me term it, of the profession; and I maintain, that it may well, *generally*, and without injury to the patient, be discarded from practice. But to return from this digression, when the practitioner directs his whole attention to arouse the secretions, I care little where or in what tissue or fluid of the human frame it pleases him to give the disease "a habitation or a name." His hypothesis, or theory, or learned fancy, or whatever else it might be called by him, thus becomes harmless; let him therefore indulge his folly, and lodge fever wheresoever it pleases him, and most learnedly descant on *the why* it should be there, whilst all his practice tends, and is entirely directed to arouse healthy secretions, by the administration of such remedies known by experience to act powerfully on these organs, though given professedly to neutralise this in the fluids or, colour that, either renovating the quality or reducing the quantity of some noxious *something* the blood is presumed to contain. With views entirely directed to the secretions, we acted as being solely affected by the nervous influence, and the well known powerful effects of the remedies we employed to these ends, will amply testify the fact; yet in defiance of all this it is asserted to the world, that a twopenny halfpenny remedy, and the appearance of the blood, pointed out by Dr. Stevens, which it will be seen exists too but in his imagination, was the cause and origin of our practice and success!

To the vulgar taunts throughout Dr. Stevens' reply, and no less vulgar threats contained therein, asserting that "it *could* be proved that Dr. Hacket admitted every syllable to be true which I have stated in my paper;"—I am at a loss in what exact language to reply; I shall, however, but merely say, I repudiate the assertion with the scorn and contempt it merits, and *defy* Dr. Stevens to the proof. I never classed, or spoke, or thought of his remedy as possessing higher powers than any other of the saline substances I have already stated, and never considered it more than the merest auxiliary, seemingly not ill adapted to keep up secretions *when once aroused*—even if I ever did say so much; and I call on Dr. Stevens now to give his threatened "proof." The fact is, that though the learned gentleman calls his remedy a non-purgative salt, and thus gives it, as he states, to act mechanically on the blood, we estimated its value on the other hand, only by its action on the bowels and secretions generally. With this view, in my first exposé it is stated, that a combination of the muriate and *carbonate of soda* with the nitrate of potass was administered to the sick, which was found, under the circumstances I have stated, to keep up the action, generally, of the viscera; from this it will be seen, we dared to act on a sound theory, and that neither the hypothesis or remedy of Dr. Stevens was, *after all*, attended to: yet this, it seems, is the reason my paper should not have been published! that Dr. Stevens might be allowed to continue to hoodwink the profession by statements founded neither on anatomical or practical facts. Soaring in the region of fancy, he mixes salt and blood together in a porringer, and from the hue thus produced, argues from analogy that the same takes place in the living system! Can there be any thing more fallacious than likening appearances drawn from such premises to the living fluid *within* the miraculous and really wonderful laboratory of the human frame? yet such, at least, so he states, is pronounced the greatest discovery ever made in medicine. Now, if rendering the peculiar deep hue of the venous blood of a scarlet colour, be proof of saline existence in it, and essential to the cure of fever, I well remember, when a student in a syphilitic hospital, how frequently this appearance presented itself when patients under the influence of mercury were blooded: indeed, I have not only started myself at the first gush following the lancet, of the seemingly arterial blood that flowed, but witnessed the same surprise in my fellow students, till the frequency of the occurrence reconciled us to the fact. I have also seen since, though not in the tropics, this self same effect exhibit itself in fever cases, treated by mercury, when the individual appeared evidently under the influence; from this I am led to imagine, if Dr. Stevens's hypothesis has any foundation in truth, its proper proof rests on the *perceptible* effects of his saline remedy on the living fluid, contained within its own proper vessels, and not by an admixture of salt and blood in a porringer. There can be no difficulty, I imagine, in testing, at least its colouring powers in disease, by adopting this saline treatment; and when the cases are presumed to be sufficiently saturated with this all-renovating and all-colouring remedy, the lancet will then *demonstrate* the truth or error of the statement, with the concomitant of bona fide convalescence. To me, something of this kind seems imperative to be done, if *the system* has really a foundation to rest on; for the ablest chemists heretofore could throw no light, by experiments on the blood, on the nature of different diseases; and although some of our first and best chemists contend that it is on a peculiar animal principle the colour of the blood depends, many, however, equally eminent, assign it to another cause: but the Stevens Sidus has "clearly elucidated the truth by the greatest discovery ever made," and fixed it on the immutable principle of sea-salt!! which we call on him now to substantiate equally by experiments on the living, as he has attempted to do on the dead fluid.

I shall now finally state, in answer to all Dr. Stevens urges in his communication, and to shew the profession generally of how much value in practice his doctrines were and are yet considered in the treatment of tropical fever, that, as far as I could learn, throughout all the following islands, which I lately visited on duty, there is not one convert to his opinions, and that the practitioners generally throughout them, respectively, cry "pshaw!" both to his writings and pretensions at Antigua, Dominica, St. Lucia, Barbados, Tobago, Trinidad, Grenada, St. Vincent; in the next place, for the last fifteen months that I had been stationed at Antigua, *not one particle* of his "sodaic mixture" was administered to a *single fever case*, and yet our practice had been equally as successful there as at Trinidad; and, although it must not be disguised but that there is a very material difference in the two stations, as regards either the frequency or intensity of fever, yet I believe "English Harbour," which was my immediate residence, is as well known amongst the medical profession, particularly the navy, for furnishing as heavy a mortality, both amongst strangers and natives, as any other part, be it where it may, amongst the Tropics. "The Ridge" is considered the most healthful situation; this part of the garrison is occupied by the 86th Regiment, nevertheless, from amongst these we have occasionally as heavy and severe cases of fever as I have ever witnessed at Trinidad; having premised thus much, I shall now quote from surgeon Cunningham's (of that corps) last report, as the means of disabusing the community of the twaddle, wilfully or ignorantly attempted to be imposed on them. Let me remark, Mr. Cunningham is an old and most respectable medical officer, and not likely to be swayed, as hinted at by the learned gentleman in respect of Mr. Greatrex, contrary to his judgment by any man; he has now been upwards of five years in the command, a portion of which he served in Trinidad, therefore may be considered no despicable authority in the present affair.

"Five cases of remittent fever were treated in the Regimental Hospital during the quarter. Two cases were also treated in quarters, of peculiar severity, viz. one officer, Major Gibson, of the 86th—the other the wife of the Serjeant-Major. These were, in particular, aggravated cases, attended with intense degree of gastric derangement at the commencement of the attack. In the whole of these cases, the beneficial effects of the croton oil, in suddenly and effectually arresting the violent irritability of stomach, and in alleviating the urgent febrile symptoms, were particularly apparent; the quantity administered was four drops for the first dose, assisted by active purgative enemata and warm bathing, or the cold shower-bath—the latter was found the most beneficial; a second dose of the oil, to the extent of one-third to two drops, was in some of the cases found necessary. The sulphate of quinine, in doses of from 10 to 12 grains daily, was had recourse to at as early a period as circumstances would permit. Venesection was in none of the cases had recourse to; no instance of protracted convalescence occurred. There is every reason to conclude that, had the excessive irritability of stomach not been arrested by the use of the croton oil, and had the symptoms been combated, as formerly, by the use of other remedies, &c. black vomit, with exhaustion, must have soon supervened, with a fatal termination."

I shall here detail a case, given also in my Quarterly Report, not only corroborative of Mr. Cunningham's opinion, but strikingly illustrative of the almost, let me say, miraculous powers of croton oil in the worst forms of tropical fever.

"I was solicited, by message from his medical attendant, to visit the parochial schoolmaster of English Harbor; being occupied, I could not attend. In about an hour, I received a second pressing message from the man's wife, to entreat I would see her husband, as the doctor declared, on departing, that he could do no more than what he had already done for him; she herself adding, 'if he did not get speedy relief he must die.' On going, I found the man had been ill of fever for three days, and, for the last fourteen hours, had laboured under irritability of stomach and almost incessant vomiting; the bowels were torpid, though purgatives and lavements had been given, and, indeed, in justice to the Doctor, I must say, the usual routine in tropical fever had been in no way neglected; there was great exhaustion—no pain—no complaint, but of constant vomiting—the skin was moist and clammy, from the violent exertions the patient was obliged to make. Here was the exact case I ever found croton oil pre-eminently useful in—I gave four drops immediately in a tea-spoonful of syrup: in a little time this seemed to increase the irritability, which is ever the case; but this soon subsided. A large bucketful of lavement was made, of salts and ol. ricini, of which four large syringes full were given promptly, and as quickly in succession as they could be administered. No operation took place, although a respite was now given the patient for about a quarter of an hour. Four more syringes full, similar to the former, were now given, when the bowels began to act; the effect produced astonished all around, both as to the excretion and quick relief obtained; suffice it to say, in about two hours the severity of its effects began to subside, the irritability of the stomach was nearly gone; the patient became tranquil, complaining only of great weakness. As we advanced (the irritability of the stomach having for some hours subsided), a ten-grain dose of quinine was given, and repeated the following day. Convalescence was now established; in a few days, health was restored." I recapitulate this merely as Trinidad practice:—Away, then, with the most groundless and unfounded assumption of Dr. Stevens, in his "Observations on the Blood," that we cured fever in that garrison by the soda combination, forsooth, of his recommendation.

Still further corroborative of what I have advanced, as regards the confidence reposed in croton oil and quinine, I herewith send you a few letters received from medical friends at Trinidad, to whom I addressed myself on the subject. You will be pleased to give to these such publicity as you may deem necessary.

I shall now take leave of Dr. Stevens and this controversy altogether, declaring—

"I'd rather be a dog, and bay the moon,
Than such a Roman,"

and shall take no further notice (except it comes in a more tangible shape than assertion, for assertion and proof seem synonymous in the Doctor's vocabulary), of whatever his singular self-sufficiency may again prompt him to state to the public. In taking leave, however, of this gentleman, I cannot, I conceive, do better than give him the following theme, taken from a modern writer, for his cogitation and application. "There is nothing better known to those who are conversant in medical practice, than that the most ignorant and the most shallow, those of the least learning, nay, those of no learning at all, are the most addicted to hypothetical reasoning—the most infested with presumption and conceit."

Should Dr. Johnson do me the favour to publish this communication, the whole statement will then be before the profession generally throughout Europe and America; to the candid and liberal of whom, in both countries, most willingly do I submit the cause of *truth*, which, and a sense of what is due to them and the public, could alone, I assure them, have induced me thus to come forward (however feebly, perhaps, I may have executed my task) in its advocacy; and should I in any manner seem to have exceeded the bounds of courtesy, beyond what the novel peculiarity of the subject demanded, I confidently claim their indulgence, and would intreat them to consider it in its true light —the *natural consequence* arising from an *highly-exciting cause*.

I have the honor to be,
Sir,
Your most obedient Servant,
W. HACKET, M.D.
Surgeon to the Forces.

To Dr. James Johnson, &c.

Printed by G. Hayden, Little College Street, Westminster.

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